

U.S. ENTRY INTO WORLD COURT URGED BY COOLIDGE

President Says It Is Next
Move America Should
Take Toward Outlawing
War.

FAVORS MORE LIGHT ON DIPLOMACY

Executive at White House
Addresses Delegates to
Conference on Causes
and Cure of War.

WASHINGTON, Jan. 24.—The administration's stand in favor of American participation in the world court was reaffirmed today by President Coolidge in an address at the White House to delegates attending the national conference on the causes and cure of war.

This step, the President characterized as the next move that should be taken by the United States toward outlawing war. He suggested also that the nation and the world should have more information and better understanding upon the problems of diplomacy.

Meanwhile, the President declared, the United States should in the interest of peace continue its endeavor to associate itself with whatever measure would tend to maintain security, but should guard the danger of a "super-government."

Lesson of Last War.
"If the lesson of this last and greatest war shall be lost, indeed will this experience have been almost in vain," said Mr. Coolidge. "It is for the generation which saw and survived to devise measures of prevention. If we fail in this, we shall deserve all the disaster which will surely be visited upon us because of our failure."

"I believe that just as the armistice conference was a timely and convincing co-operation on the political side, so the Dawes plan was a similarly timely and effective effort for rehabilitation on the economic side."

"I believe that the next step which we may well take is by way of participation in the permanent court of international justice. I believe that with our adherence to that tribunal, for which I earnestly hope, it will become one medium by which we may gradually be precipitated and crystallized a body of international law and procedure which, by avoiding the dangers that would attend the establishment of a super-government, will ultimately commend the respect and approval of the world's public opinion and the co-operation of the nations."

Faith in Public Opinion.
"I am convinced that if our civilization is worthy of its name, then physical force is not the only authority which may enforce an anti-war policy. I feel strongly that public opinion, based on proper knowledge working through agencies that the common man may see and understand, may be made the ultimate authority among the nations."

SETS RECORD FOR PLANE GLIDE
Frenchman Afloat Two Hours 26 Minutes With Propeller.

SAINTREMY DE PROVENCE, France, Jan. 24.—Lieut. Thoret, the French aviator, carrying a passenger in a regular army airplane with the propeller locked and sealed, remained afloat two hours and 26 minutes today. This breaks the record for notorious flight with a passenger, which was established by Lieut. Thoret at Algiers, Algeria, last year, by more than one hour.

JAPANESE VOLCANO IN ERUPTION
TOKYO, Jan. 24.—Shirane-san, one of the highest peaks of the Japanese range, 80 miles northwest of Tokyo, was reported in active eruption yesterday, a huge volume of smoke being emitted. Today a heavy explosion and loud rumbling occurred while dense ash showers continued over the surrounding area.

To Unveil Wilson Memorial.
WASHINGTON, Jan. 24.—President Coolidge will attend tomorrow the unveiling of a memorial tablet to Woodrow Wilson at the Central Presbyterian Church, of which Mr. Wilson was a member.

\$22,150,000 Army Bill Passed.
WASHINGTON, Jan. 24.—The annual army supply bill, carrying \$22,150,000, was passed today by the Senate.

PARTLY CLOUDY TONIGHT, SUNDAY WILL BE COLDER

THE TEMPERATURES.

At 8 a. m.	31	At 8 a. m.	28
At 10 a. m.	30	At 10 a. m.	27
At 12 m.	29	At 12 m.	26
At 2 p. m.	28	At 2 p. m.	25
At 4 p. m.	27	At 4 p. m.	24
At 6 p. m.	26	At 6 p. m.	23
At 8 p. m.	25	At 8 p. m.	22
At 10 p. m.	24	At 10 p. m.	21
At 12 m.	23	At 12 m.	20
At 2 a. m.	22	At 2 a. m.	19
At 4 a. m.	21	At 4 a. m.	18
At 6 a. m.	20	At 6 a. m.	17

Highest yesterday 33 at 4 p. m.; lowest 21 at 7:30 a. m.

Official forecast for St. Louis and vicinity: Partly cloudy tonight and Sunday. Colder. The lowest temperature tonight will be about 32. Missouri: Some what unsettled tonight; colder in the morning; Sunday generally fair and colder. Cloudy and unsettled tonight; warmer in southeast portion; Sunday generally fair and colder. Sun rises at 7:13 a. m.; sets at 5:13 p. m. Stage of the Mississippi River at St. Louis: 11.1 feet at 7 a. m.; no change.

Week's Weather Outlook.
WASHINGTON, Jan. 24.—Weather outlook for the week beginning Monday: Upper Mississippi and Lower Missouri Valleys—Snows or rains toward middle of week; cold at beginning, moderating about middle and cold again latter half.

Jury Foreman Could Not Read English; But Verdict Stands

NEW YORK, Jan. 24.—A jury in a Jersey City courtroom yesterday reached a verdict although the foreman, James Melachuk, who said he could neither read nor write English and understood very little of it, failed to cast a vote.

Judge Adam O. Robbins of Hunterdon County, who presided, ruled that such a verdict would be acceptable after conferring with attorneys for the plaintiff and defendant. James Melachuk, the foreman of the jury, said he understood little of the evidence submitted in the case of Anthony Timmerio, who sued Paul Chirale of Hoboken, for injuries inflicted during a fight last March. The verdict was in favor of the defendant.

ASQUITH ACCEPTS PEERAGE
Former Premier of Great Britain Becomes an Earl.

LONDON, Jan. 24.—Herbert H. Asquith, former British Premier, has accepted the offer of an earldom for the plaintiff and defendant. James Melachuk, the foreman of the jury, said he understood little of the evidence submitted in the case of Anthony Timmerio, who sued Paul Chirale of Hoboken, for injuries inflicted during a fight last March. The verdict was in favor of the defendant.

Five Killed in Landslide.
SEATTLE, Wash., Jan. 24.—Five men were killed, two were injured and another suffered serious injury today in a landslide at a construction camp at Concrete.

In Tomorrow's Sunday Post-Dispatch
The Evolution of a Jazz-Maniac—How a California flapper went from gin to sin and ended by murdering her mother.

She Flew With the Chicken Money to the Works.
HENRY SWARENGIN believes he does not understand women, and why he persists in searching for his wife, although the search has taken his life savings.

War, Sport and Art Are His Relaxations Between Marriages.
The diverting career of Preston Gibson with an explanation of his fatal charm which led three heiresses to marry and divorce him.

Why Home Looks Good to This Young Man.
Back from broad, Kansas boy tells thrilling tale of a year's involuntary service as soldier against the Moors, during which he was captured and saw comrades executed.

The Former St. Louis Physician Who Was Hanged for Wife-Murder.
Related by a widely known novelist, this bit of crime history makes a gripping picture of human weakness and wickedness.

Permalloy, a New Marvel, Speeds Up Cable Service Against the Atlantic.
Tiny strip of it, 10,000 miles long, is wrapped around the new cable from New York to the Azores, and it increases traffic capacity five times.

Order Your Copy Now

SENDER ASSERTS WOMAN TRIED TO CHOKO HIM

Wealthy Bachelor Ends Testimony After Cross-Examination in Breach of Promise Suit.

MRS. CAMPBELL TO TAKE STAND AGAIN

Defendant Says His Feelings for Plaintiff Were of Sympathy Rather Than Love.

Charles P. Senter of 1 Beverly place, wealthy bachelor, heaved a sigh of relief at 10:55 a. m. today and stepped down from the witness stand in Circuit Judge Hamilton's Court. His testimony in the \$200,000 breach of promise suit against him was ended.

Through his testimony, under direct and cross examination, which began last Tuesday, Senter had repeated again and again: "I respected her and sympathized with her, but I did not love her, and I never proposed marriage." He was referring to Mrs. Ella Mae Campbell, the plaintiff in the case.

Defense Rests.
The trial, which was started last Monday, is not yet completed. The defense rested with Senter's testimony, but Mrs. Campbell's counsel announced she will testify in rebuttal Monday morning. Arguments by counsel and instructions by the court will follow, with a probability of the case going to the jury late Monday.

Most of Senter's testimony today centered around the scene at his Beverly place residence on May 30, 1923, the last meeting of Senter and Mrs. Campbell, whose first meeting was a flirtatious one at Broadway and Olive street in August, 1909. Mrs. Campbell has testified Senter struck her with his fists and knocked her down, when she went to his home to learn why he was "chained with the case."

Says She Was Choking Him.
Senter's version today, an amplification of his previous one, was that she had her hands around his neck, choking him, and in putting up his hands to defend himself, they met hers and she "stumbled and fell backward."

"I loved the man from Havana, and the man from Savannah, until I met you," sang Mrs. Campbell in one of her many loving letters to Senter, she declared in a recent letter, by inquiring "How is the ball on the back of your neck?" Senter, in reply to a question, said he remembered the letter, but not the ball.

Doesn't Remember Ball.
"I loved the man from Havana, and the man from Savannah, until I met you," sang Mrs. Campbell in one of her many loving letters to Senter, she declared in a recent letter, by inquiring "How is the ball on the back of your neck?" Senter, in reply to a question, said he remembered the letter, but not the ball.

Once Sent Her Some Wine.
A letter of thanks in which Mrs. Campbell wrote she was glad Senter had brought "it" to her in person, instead of sending "it" was read, and Senter was asked what "it" was.

Their Usual Meeting Place.
"When we met at the usual place," wrote Mrs. Campbell in one letter, "the usual place" was at Ninth and Olive, wasn't it?" Lay inquired.

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From Sky and Land Astronomers Get Clear View of the Sun's Eclipse

Photographs Taken by Scientists Must Be Studied for Weeks Before Their Actual Findings Can Be Determined.

Although Clouds Obscure the Spectacle in Western States, East Obtains Perfect Glimpse of the Phenomenon.

ABOARD NAVAL DIRIGIBLE LOS ANGELES, ENROUTE FROM NANTUCKET, MASS., Jan. 24.—(By wireless to the Associated Press): Lifted a mile closer to the sun by the navy dirigible Los Angeles, the United States Naval Observatory astronomers had a perfect view of the total solar eclipse. During the two minutes, four and six-tenths seconds of totality, not a cloud marred the magnificent spectacle of the sun completely blotted out by the moon.

The ghostly radiance of the eclipsed sun turned the ocean, horizon and the clouds below into a vivid picture in yellow, purple and gray while observers made pictures of the corona for science. A battery of four astronomical cameras secured 18 photographs and two motion picture cameras and a spectrograph were in operation. The latter instrument recorded the spectrum lines of helium gas which holds the Los Angeles aloft. Hydrogen, which helps supersede, was also recorded, and both helium and hydrogen occur in the outer layers of the sun.

The dirigible Los Angeles returned to the naval air station at Lakehurst, N. J., at 2:20 p. m. today.

Unusually High Tides.
SAN FRANCISCO, Jan. 24.—Extremely high tides, believed due to the eclipse of the sun, were officially reported here today by the naval observatory at Mare Island.

Temperature Dropped 1.3 Degrees.
NEW YORK, Jan. 24.—The temperature dropped over 1.3 degrees during the totality of the eclipse today, the United States Weather Bureau at Cornell University reported after the phenomena.

Eclipse Pools Flock of Seagulls.
ELMIRA, N. Y., Jan. 24.—A flock of thousands of seagulls which spend the winter days feeding along the Chemung River here, were fooled by the eclipse. As darkness fell, the gulls rose from the river and started for Watkins, 22 miles distant, where they make their nightly roost. Before they were out of sight, the shadow began to leave the sun, and the gulls returned about and returned to the river.

Runs Amuck Because of Eclipse.
NEW YORK, Jan. 24.—Laboring apparently under a hallucination that the eclipse of the sun marked the end of the world, E. C. Washington, an aged negro barber employed in the Senate wing of the Capitol, ran amuck early today with a razor and before he was captured after an exciting chase by Capitol police, he slashed one of the engineers of the building on the face.

Two Degree Drop in Temperature.
NEW YORK, Jan. 24.—Crowds massed on the hill tops had an unusual view of the eclipse shadow as it glided across the brow of the Palisades on the opposite side of the Hudson river. During the eclipse the temperature dropped from seven degrees above to five degrees, and after the eclipse again rose to seven.

Clouds Spoil 95 Per Cent View.
CHICAGO, Jan. 24.—At the time for the greatest obstruction of the sun by the moon today, smoke and haze prevented observation by Chicagoans of the eclipse. At sunrise the sun could not be observed through the clouds.

Photo of Sun in Water.
MICHIGAN, TITLED, Jan. 24.—An army aviator and a civilian camera man reported today they had obtained a perfect photograph of the crescent of the sun in partial eclipse as it was reflected on the tranquil waters of Long Island Sound.

Test Shows Eclipse Changed Direction of Radio Waves.
WATERBURY, Conn., Jan. 24.—The Bristol Co. Radio Wave Direction tests conducted here this morning during the eclipse by Prof. W. H. Bristol and David Grimes proved conclusively that signals faded out definitely as the eclipse approached totality and that the direction of the waves changed as much as 15 degrees to the West from normal.

Grimes stated that the reception from station WJAR, broadcast especially for this test, by Henry R. Neely, instead of being amplified by the eclipse, was diminished very materially. This proves, he said, that contrary to their previous opinion, the eclipse did not effect conditions similar to night time as anticipated, but, however, that it effected conditions similar to dawn and twilight as to direction, as indicated by the loop.

COMMITTEE URGES AN ENFORCEMENT POLICY ON BAKER

Business Men Present Him With Resolutions Asking Co-operation by "Precept and Example."

MAKES TALK BEFORE COMMERCIAL CLUB

Governor Assails Wealthy Tax Dodgers and Promises to Stop "Leaks" in State Expenditures.

Gov. Baker, whose time of late has been largely devoted to reception of individuals and committees seeking political favors, obtained a temporary respite in a 16-hour visit to St. Louis yesterday and today. Instead of dealing with practical politics, he received a business men's committee which urged upon him a program of law enforcement by "precept and example," and later he delivered an address before the Commercial Club at the Racquet Club on "Missouri."

He departed for Jefferson City at 9 a. m. today, accompanied by Adjutant-General Rumbold. The committee, led by William H. Danforth, president of the Ralston Purina Co., presented him with a copy of the resolutions and the Committee of One Thousand in the East recently presented to President Coolidge at a White House breakfast.

Tenor of Resolutions.
The resolutions urged all officers, appointive and elective, to join the committee by "precept and example and so far as they may, by active participation in all administrative efforts, in maintaining among the citizens of our republic, the high determination to obey and enforce the law of the land."

President Coolidge's attitude in his "conscientious obedience to the provisions of the eighteenth amendment" was commended in a second resolution in the "hope that his example may induce those who are now willfully violating the prohibitory statute to accept his leadership in conduct and indorse in practice the integrity of his fidelity to the supremacy of the law."

Governor's Response.
"I appreciate the interest business men have in such a program," Gov. Baker said. "It reflects good citizenship and I assure you that a program of law enforcement will be one of the significant features of my administration. Law enforcement is made mandatory by my oath of office."

A letter, signed by 29 business men, accompanied the resolutions, informing the Governor that their support would be with him in "every aggressive effort" he made for law enforcement.

The signatures attached to the communication were of Herbert S. Hadley, W. Palmer Clarkson, M. L. Wilkinson, J. Lionberger Davis, William H. Danforth, F. A. Sudholt, Joseph D. Bascom, Louis Bostwick, Woodson K. Woods, Clarence H. Howard, John W. MacIvor, John W. Frisette, George W. Sutherland, Charles M. Hay, Lansing F. Smith, Lester C. Haworth, Joseph W. Bray, John S. Leiby, O'Neill Ryan, John M. Atkinson, L. Wade Childress, E. D. Nims, Christian Bernet, E. S. Pillsbury, David W. Hill, Marshall Hall, Paul W. Brown, E. Lansing Ray, Aaron Walheim.

Address at Racquet Club.
The Governor's address at the Racquet Club was for the most part a thing of levity and humor, although he indicated to his business friends present that he was "safe" by promising to stop the "leaks" in expenditures of State funds.

There is less than \$7,000,000 revenue annually coming into the State coffers within the next two years," he said, and then outlined the various demands that would be made upon it. "We have been diverting too much money to special funds. There is enough revenue for this great State to do all that we want to do if we can stop the leaks and put it where it belongs."

He tossed a verbal dart at the "rich man who makes a \$250 personal property tax return on a house full of furnishings that would please a King," and added that when his family had only a "cook stove and a bed" they made a higher return than that.

Poetic Quotations.
Gov. Baker's story-telling proclivities, which made him a favorite in the rural communities, because for the most part they dealt with things rural, were unleashed at every turn. His capacity for poetic quotations was tapped deeply.

Outlining the matters in which

FOUR AFFIDAVITS FOR ENGLISH INQUIRY FILED WITH HOUSE SPEAKER

COLBECK AND PALS MUST STAY IN JAIL PENDING APPEAL

Egan Gang Leader and Eight Associates Lose Fight for Bail in Staunton Robbery.

Special to the Post-Dispatch. CHICAGO, Jan. 24.—"Dinty" Colbeck, Egan gang leader, and eight of his associates in the \$34,000 mail robbery at Staunton, Ill., today lost their fight to get out of Leavenworth Penitentiary, pending a hearing on their appeal from the 25-year sentences imposed by District Judge Fitzhenry at Quincy, Ill.

As a result the Egan gangsters are to continue serving their sentences until such time, at least, until the United States Circuit Court of Appeals acts upon their appeal from their conviction at Quincy.

Counsel for the mail robbers argued that the grand jury which indicted them was presented with incompetent evidence, and cited all the precedents in the trial before Judge Fitzhenry. Judges George T. Page and Samuel Alschuler denied both supercedes writ and bail. The conviction attorneys were granted leave to file a bill of exceptions, hearing on which will be held Feb. 4.

JUDGE HALL FILES HIS CANDIDACY FOR MAYOR
Early Action Taken to Still Rumors That He Was Not to Run.

Circuit Judge Robert W. Hall, elected last November to serve his second six-year term, filed his candidacy for Mayor, subject to the Republican primaries, March 13, with the Board of Election Commissioners today.

Judge Hall formerly had announced that he was to file Monday. Early action was taken, he said, to set at rest rumors that he was not to be a candidate.

Eclipse "Like Democratic Defeat."
WASHINGTON, Jan. 24.—William Jennings Bryan conferred for 20 minutes with President Coolidge today and told newspaper men that he felt compelled "to give the stock answer—a social call," in response to all inquiries. Leaving the White House, he was photographed viewing the eclipse of the sun. "It's just like a Democratic defeat," he said. "The sun will shine again."

Used Car Week Is Nearly Over
Used Car Week is drawing to a close, but there are still many excellent cars left and offered at especially attractive prices and on convenient terms.

You will find a large number of makes and models to choose from in the classified "Automobiles," columns of today's Post-Dispatch. Select the ones that most appeal to you and investigate them at the dealers. Watch for the Used Car Week seals on windows and in the classified "Automobiles" advertisements. These are the bargain signs of Used Car Week. Act quickly for others may want the same car you do.

Prohibits Whisky for Bathing.
GALVESTON, Tex., Jan. 24.—Use of whisky for bathing purposes is not permissible under the prohibition law, Federal Judge J. C. Hutcheson held yesterday in assessing a \$50 fine against Mrs. Lena Russ, charged with possession of liquor. Mrs. Russ maintained she used the whisky to bathe her baby, and not to drink.

PETITIONS FROM EAST SIDE CITIZENS ARE REFERRED BY GILLETTE TO THE JUDICIARY COMMITTEE.

INVESTIGATION NOW SEEMS ASSURED

Former Referee in Bankruptcy Would Be Included—Decision of Rules Body Awaited.

By PAUL V. ANDERSON, Staff Correspondent of the Post-Dispatch. WASHINGTON, Jan. 24.—Four petitions for a congressional investigation of Federal Judge George W. English of East St. Louis, accompanied by sworn affidavits, were received today by Speaker Gillette of the House of Representatives. The Speaker immediately referred them to the House Judiciary Committee.

If it follows the customary procedure, the Judiciary Committee will now ask the House for authority to conduct the investigation.

It seemed likely, however, that before acting the Judiciary Committee would wait to see what action the Rules Committee takes next Monday on the Hawes resolution. If the Rules Committee decides to bring in the Hawes resolution, the Judiciary Committee probably would start its investigation under the authority conferred by the resolution.

Inquiry Seems Assured.
If the Rules Committee continues to delay action on the resolution, or definitely decides to reject it, then the Judiciary Committee may proceed under the citizens' petition received today.

At any rate an investigation of Judge English now seems assured unless unforeseen obstacles arise in the Judiciary Committee. Representative L. C. Dyer of St. Louis, ranking Republican member of that committee, has repeatedly declared that the filing of charges with the Speaker would result in a prompt investigation by his committee. That condition has now been met.

An inquiry would extend into the conduct of Charles B. Thomas, a recent Illinois gubernatorial aspirant, who resigned two weeks ago as Referee in Bankruptcy in Judge English's district following exclusive publication in the Post-Dispatch of the fact that the Department of Justice had begun an official investigation of his office and an unofficial investigation of voluminous complaints against Judge English.

The petitions were forwarded to Washington as a result of the apparent disinclination of the House Rules Committee to report favorably for an investigation presented 10 days ago by representative Harry B. Hawes of St. Louis. Hawes based his resolution upon Post-Dispatch news stories and the editorial demand of this newspaper that Congress should inquire into affairs in Judge English's district and in Referee Thomas' office.

Those petitioning the Speaker for an investigation, and who made sworn affidavits concerning Judge English, were Charles B. Karch, former United States District Attorney in English's district, the Eastern judicial district of Illinois; Thomas M. Webb, an East St. Louis attorney; M. P. Murray, Commissioner of Finance of East St. Louis; and A. F. Franks, a cigar merchant of East St. Louis.

The Judiciary Committee for several months has been conducting an investigation of the official conduct of Federal Judge William Baker of the Northern District of West Virginia. Testimony is being taken by a subcommittee, of which Dyer is chairman. This investigation was started by the filing of charges with the Speaker. The complainant in that case was the District Attorney of the court.

By the Associated Press.

GIVES \$1000 TO START PENSION FUND FOR POLICE

F. C. McDonald Sends Check to President Brockman to Become Nucleus of Benefit for Officers.

GIFT CONDITIONAL ON RAISING \$500,000

Sends Letter in Which He Points Out Issue Should Be Placed Before Citizens and Business Men.

F. C. McDonald, 210 North Skinner road, an automobile dealer, has given a check for \$1000 to President Brockman of the Police Board to become a nucleus of a citizens' pension fund to retire aged officers on a competency.

The gift, as stated in McDonald's letter, is conditional on the raising of at least \$500,000 by donations of \$1000 or more from other citizens or business firms.

President Brockman acknowledged the gift and said he would use it in an effort to accomplish the end sought.

The police have no pension fund, except a small competency they receive from their own relief association upon retirement from age or disability any time after five years in the service. This is not sufficient in any case to care for them for long. The only relief in sight for police is present in a bill now pending before the Legislature for an increase in salaries.

The text of McDonald's letter to President Brockman accompanying the gift follows:

"In many official interviews you have repeatedly called attention to the need of a pension fund for police officers who have been disabled in line of duty or who have reached a proper age for retirement from long and faithful service. The State of Missouri has done nothing and the City of St. Louis has taken no action. Now, then, in order to bring this issue squarely before the citizens and business men of St. Louis, who live and property are now inadequately protected, we herewith attach our check for \$1000, payable to the Board of Police Commissioners, which will be cashed and applied to a police pension fund, if within a reasonable period of time enough other business firms and individuals will subscribe a similar amount or more so that the fund will amount to at least \$500,000."

President Brockman said he believed McDonald's suggestion was the only way this fund could be created, by legislation to this end has failed.

HENKE RELEASED FROM JAIL ON \$30,000 APPEAL BOND

Professional Bondsman, Produce Merchant and Grocer Sign Bail for Convicted Wife Slayer.

Harry A. Henke, under sentence to serve 20 years in the penitentiary for the murder of his wife, Marie, was released from the St. Louis County jail today upon appeal bond of \$30,000.

Henke, who has been in jail since the night of his conviction, Sept. 27, last, was granted the right to appeal to the Supreme Court more than a month ago, but had not been able to get bondsmen. Today George Dominick, professional bondsman, Michael Whalen, produce merchant, and Henry Herger, a grocer, signed the bond.

TWO SISTERS, TAKEN ON ROBBERY CHARGE, RELEASED

Salesman, Who Made Complaint to the Police, Refuses to Prosecute Them.

Mrs. Pauline Stroe, 21 years old, and Mrs. Loretta Schauberg, 19, sisters, of 1211 Grattan street, who were arrested on complaint of John A. Meyers, Southeast Missouri grocery salesman, that they had held him up with a revolver while riding with him in his automobile and \$40, were released at 5 p. m. yesterday, when Meyers said he would not prosecute them.

COOLIDGES VIEW ECLIPSE

Watch Spectacle Through Smoked Window Glass.

WASHINGTON, Jan. 24.—President and Mrs. Coolidge, with places of ordinary smoke-smudged window glass as their only scientific apparatus, viewed today's eclipse of the sun from the south lawn of the White House. The chief executive and his wife appeared on the lawn at 8:40 o'clock, the President carrying a window pane with a big smoked spot in the center. Mrs. Coolidge had a smaller piece of glass similarly prepared.

The sharp morning air served to limit the Presidential observations to about 10 minutes, while photographers sought to get some pictures in the waning light. Coolidge went to his office before the eclipse reached its maximum, and started to work, evidently satisfied with his view of the preliminary part of the spectacle.

St. Louis Clouds Break As Moon Nearly Hides Sun

Up to That Moment Smoke Had Alternately Revealed and Obscured Eclipse—Thousands View Spectacle.

Watchers who tried to get a view of the sun when the moon had 86 per cent of it under cover at 7:55 o'clock this morning were compelled to look quick to see the phenomenon at its best, for rifted clouds that hovered above the Eastern horizon kept the eclipse in an intermittent game of hide and seek.

At intervals, however, the occasion furnished a brilliant and awe-inspiring spectacle to thousands of St. Louisans who awaited it with extraordinary interest. For days it had been heralded as the nearest approach to a total eclipse visible in St. Louis since 1860 and long before the sun for it to appear, the event was the dominating topic of conversation among early morning workers.

Clouds Lift for Eclipse.
When the first rays of sunlight began to break through the smoke of East St. Louis about 7:15 there were hundreds already scanning the sky from the streets and many, equipped with smoked glasses and cameras, had clambered up ladders to the highest points of vantage in the downtown district. Even if the spectacle was not continuous, they were well rewarded for their trouble, for between 7:30 and 7:55, when the area of the shadow was largest, the clouds and smoke seemed to step aside in deference to grandeur and the small rim of sun that remained visible grew strong enough to cast a clear shadow of the watchers.

Strangely enough, it was during these moments when the eclipse was nearest totality that the sunshine seemed strongest, the daylight greatest and one's shadow most distinct. A few minutes later, when the moon's shadow was already rapidly withdrawing, the day grew perceptibly darker as smoke clouds rolled upward, and even from the top of the Railway Exchange Building, where a Post-Dispatch reporter and photographer are stationed, it was difficult to discern the tops of lower buildings three block away.

A setting of coloring that ornamented the eastern sky half an hour before the sun appeared seemed to portend an unusually dramatic event of the heavens. When the first evidence of dawn was visible a few minutes after 6 o'clock, red bars were stretching across the east. By 6:30 they had radiated to the top of the sky, resembling the reflection of a great fire at night and as daylight broke, reddish white clouds gave the entire eastern and southern part of the sky an appearance

Astronomers Get Clear View of Sun's Eclipse

Continued from Page One.

the country by telegraph and telephone was a success. Professor Brown said, "Just before totality some cirrus clouds took on beautiful colors. Some promised a rainbow, but before the eclipse became total, they disappeared, the professor said."

Success Not Yet Known.
It would be several days, Professor Brown stated, before the results of the observation and the scientific success of the photographs is determined. It will be several weeks before it is determined whether anything new has been discovered, the professor said.

Shadow bands appeared one minute before and one minute after totality. They were not pronounced. Jupiter, Mercury and Venus were clearly visible. Apparently no comet was seen, according to the information received here, Professor Brown said.

Phenomenon Varied.
In the exchange of telegrams by the scientific observers stationed at various points, Mendenhall reported great success. Eastman reported perfect conditions for color photographs and Buffalo said the color effects were beautiful. Pugh reported a streamer of unusual shape.

Ithaca reported a drop of five degrees in temperature during totality and said that clouds which obscured the sun cleared away a moment before totality.

Wonders of Spectacle Stop Work in New York

By the Associated Press. NEW YORK, Jan. 24.—The marvelous spectacle of the total eclipse of the sun was observed here today at 9:11 a. m. under perfect conditions.

Not a cloud screened the passing of the moon before the sun's disk, and all the attendant phenomena—Bailey's Beads, the shadow bands and the pearly corona—were observed by thousands who filled streets and house tops in the northern section of the metropolis.

Stars Shout Out by Day.
Mercury, Jupiter and Venus were clearly visible at night. Green, gold and scarlet colors added to the grand spectacle. The corona of the sun was perfect.

The shadow of the total eclipse stole across the snow-covered landscape, visible about 3 minutes before and after the totality. The total eclipse lasted for about 30 seconds, as scientists had forecast.

A purple light gradually descended over the earth, forerunning the

SHORT RADIO WAVES LONG DURING ECLIPSE

Long Waves, Irregular Before, Noticeably Regular During Totality Period.

By the Associated Press. NEW YORK, Jan. 24.—From tests made of the behavior of the ether of the air during the total eclipse today, officials of the Radio Corporation of America deduced that short wave length follows the sun, that static is not entirely a local condition because it was affected by general conditions and that a long wave length, irregular before the eclipse, became noticeably regular during totality.

Short waves of 25 meters and long waves of 250 meters, sent out from WGY at Schenectady were picked up at the Bronx Laboratory. Dr. A. N. Goldsmith, chief broadcast engineer in charge said: "The short wave could not be heard until just before sunrise when it came faintly. As the sun appeared the waves grew stronger. As the short wave lengths increased the static decreased. During totality the short wave was blotted out and conditions were exactly the same as before the sun rose. When the eclipse ceased the short waves and static returned as the sun appeared."

The long 350 meter waves were irregular before the eclipse but became noticeably regular during totality. As the sun began to shine again the irregularity increased and the static returned.

PHILADELPHIA, Jan. 24.—Radio station WDAR, Philadelphia, announced that a marked departure from the direction of their tone wave had been observed by radio scientists stationed at Waterbury, Conn., immediately before and during the first stages of the eclipse.

The statement, dated Waterbury, Conn., given out by the station reads in part: "A violent agitation in the direction of the tone wave being received here from WDAR by Dr. William H. Bristol and David Grimes, radio scientists, was observed at 7:45 a. m., 19 minutes prior to the eclipse."

"The directional changes of the wave, coming into the receiving instrument, were so rapid in their changes at this time that it was impossible to follow or measure them."

"In the next 15 minutes the agitation decreased, leaving a fixed departure of three degrees from the original source of the wave."

Radio station WIP, Philadelphia, announced receipt of a cablegram from station 2-L-O, London, England, as follows:

"Report reception WIP, 8:12 A. M."

ILLINOISAN, HELD FOR KILLING SWEETHEART, ALTERS STORY

Wounded Man Now Says That Girl Handled Weapon With Which Both Were Shot.

Special to the Post-Dispatch. PEORIA, Ill., Jan. 24.—After being ordered held for the murder of his sweetheart, Mary Ellen Miller, 29, Fred Lichtenberger today claimed that he handled the revolver which resulted in her death and serious injury to him. On the day of the shooting, Lichtenberger indicated that she begged him to shoot her. He told of firing two shots into her head and then turning the weapon on himself.

His second confession was made to State's Attorney Dunkelberg, who visited him after finding two notes. One of these was in his pocket, the other was in the mail in front of City Hall, who were among the first to detect the eclipse. Smoked glasses were passed from hand to hand, but the main eye, at that time, the niche made by the screen across the sun was plainly visible.

In Darkness.
All the colors of the spectrum seemed to burst outward from the moon's disk reddish rim. Like a huge blow torch, they rushed and subsided, in a fringe which at times extended the width of the moon beyond the edge of that icy planet. It seemed like many minutes rather than a few seconds that darkness saturated earth and sky, except for that small portion where the dazzling circle of colorful fire.

Then slowly the shadow bands appeared on the opposite side of the solar-lunar conjunction, Bailey's beads, their other crescent again.

By this time the corona had subsided, faded into invisibility by the resplendent splendor of the sun. A few minutes more and the spectacle turned into the final stages, looking much as it did in the initial phase only in the reverse—like a quivering, evolving, natural brilliance moon of the sun to full moon proportions.

Australia Reports Cyclone.
Damage Caused by Storm Estimated at \$500,000.

STONEY, Jan. 24.—A cyclone sweeping through Northwest and Western Australia, according to reports received today, caused damage estimated at \$500,000.

Telephone Lineman Electrocuted.
Special to the Post-Dispatch. FULTON, Mo., Jan. 24.—C. E. Cook, 35 years old, of Mexico, Mo., a lineman for the Southwestern Bell Telephone Co., was electrocuted last yesterday afternoon while at work on a telephone pole of the trunk line between Mexico and Fulton north of this city. Cook is survived by a widow and one child.

SENDER STILL ON STAND IN BREACH OF PROMISE SUIT

Continued from Page One.

"It was one of the nicest places—" "Oh, so you know all the 'nicest places'?" "Well, it was a respectable place."

Another meeting at the downtown Postoffice, Ninth and Olive streets, was mentioned in another letter. Senter indicated this was a good place, but not the best, adding, "I said Scruggs' Tenth street entrance was where people go when they're not ashamed to be seen."

Downtown "Scene" Described.
Previous testimony had described a "scene" which began in front of the Tenth street entrance of the Tenth street station and ended at Mrs. Campbell's headquarters after Mrs. Campbell had intercepted Senter in his automobile with a "Mrs. Ellis," and had jumped on the running board.

Senter was asked about a letter by Mrs. Campbell questioning his veracity in regard to activities at his Meramec River clubhouse, and asked, "Do you universally tell the truth?"

"I always try to tell the truth," he answered. "I remember one letter in which Mrs. Campbell said I had deceived her, but that didn't make the charge true."

"I don't know when we were never separated," wrote Mrs. Campbell in another letter. Senter was asked how he interpreted that sentence. He replied: "I conveyed to my mind that she had matrimonial intentions; that she wanted me."

"Wanted you for her own?" asked Attorney Lacy. "I think we will admit that," Senter said. "I don't know she had 'desires' on him."

"She felt she wanted you all right," Senter said. "I thought she wanted me all right, but I don't know if she could, but if not, she wanted me anyway. It was the worst letter I ever received."

"Despite this 'worst letter' in which she stated she had matrimonial intentions, you continued to associate with her for years and, as you humorously expressed it, you 'sympathized with her'?"

"When, then, and even from the beginning, that she had designs on me?" "Isn't it a fact that you are obsessed with the idea women are crazy about you and always want to take you out?"

"Attention being sustained, the question was amended to: 'Isn't your obsession about people—females—always wanting you?'" "I would say it is not."

Suicide Threat in One Letter.
Senter here recalled that the letter in question was "not the worst," but "among the worst" he had received from Mrs. Campbell. The worst letter, he said, was one which started with birthday greetings to him and ended with a "suicide threat" taken on.

The jovial, portly, rosy-cheeked witness, who in the meantime had been brought to light that Senter's birthday is on Valentine's day, Senter will be 55 years old next Feb. 14.

Something of a surprise was created when Lacy produced a letter which Senter had written to Mrs. Campbell in 1918. Mrs. Campbell had told of destroying all letters received from Senter, but he explained this one had been filed among business papers, as in fact it was.

Senter acknowledged receipt of a \$500 check in partial repayment of \$500 he had lent her for her Kansas City beauty parlor. She had established a parlor at 613 Hamilton avenue here, also with his financial assistance.

Contents of Surprise Letter.
Among the 220 pages of correspondence previously read, there were carbon copies of several letters which Senter had written to Mrs. Campbell. In this, the only original produced, Senter was less formal than in the copies he produced, but he was still far from being as ardent as Mrs. Campbell says he was in person.

"I cannot tell you how much I appreciate your sweet letter," he wrote. "Something seems always to prevent me replying promptly, and besides, you know I am a very poor letter writer. Nevertheless, my intentions are good and I shall try to write more often." After telling of his nephews, then in the army, and of his sister's worry over them, he said that for the first time he had a hair cut, but he feared his hair is too far gone to do much good.

"I lost nearly all the buttons off my dress last Sunday. I hope you found them," Mrs. Campbell informed Senter in one letter. Senter admitted he had found the buttons in his automobile, and he expressed the opinion they had been sewed on poorly.

"Were you fondling her when you two were in your automobile?" "I wouldn't be surprised," Senter said.

She Called Him "Daddy."
Senter testified Mrs. Campbell had called him "daddy" as early as their first buggy ride, in 1909.

"Don't you think that was an undue familiarity with a man of your position and standing?" "Under the circumstances, I do not."

Senter repeatedly had said Mrs. Campbell "importuned" him to take her riding, to theaters, and other places of amusement, and generally to make her "happy." Yesterday he admitted he "importuned" her, but he said his "importuning" ceased after 1910, and from then until 1923 she "importuned" him.

"I never lost interest in her. I was always interested and sympathetic."

Tried to Soothe and Quiet Her.
You were expressing sympathy

CARDINAL OFFICIATES AT CHICAGO WEDDING

Miss Loretta Hines, of Evanston, Becomes Bride of Howell Howard of Dayton.

Special to the Post-Dispatch. CHICAGO, Jan. 24.—Chicago's "100,000 wedding" was solemnized at noon today when Miss Loretta Hines, daughter of Mr. and Mrs. Edward Hines of Evanston, was married to Howell Howard, son of Mrs. Maxwell Howard of Dayton, O., in Holy Name Cathedral, George Cardinal Mundelein officiated.

It was the first wedding ceremony presided over by Cardinal Mundelein since he was elevated. Members of the Chicago Symphony Orchestra played a fantasia as the Cardinal entered and Tito Schipa, Chicago Civic Opera star, sang after the ceremony.

Two thousand relatives and friends attended the wedding. Before the invited guests arrived there gathered in front of the Cathedral a large assemblage of the uninvited.

Miss Hines wore a wedding gown of white velvet, embroidered in pearls and silver, with a long court train lined with cloth of silver. Her veil was of rare old lace. In place of a bridal bouquet, she carried a white prayer book, the gift of Bishop Kelley of Oklahoma, and crystal rosary beads, the gift of Pope Pius XI. Her only ornament was a diamond pendant, the gift of the bridegroom. Bishop Kelley celebrated the nuptial mass.

COMMITTEE URGES AN ENFORCEMENT POLICY ON BAKER
Continued from Page One.

Missouri took precedence over other States, he laid the foundation for his first story by saying that he had been in the State of Missouri for the greatest hour in the Union.

"Missouri's rural districts are noted for the gentleness of their steeds," he said seriously. "They've got to be gentle. What would a young fellow do, when he went sparkin' if he was driving a horse that needed any attention. Why, those horses know every primary and secondary road in their country."

Story of the Bashful Suitor.
"I'm not ashamed of my bashfulness and I wouldn't give a cent for a fellow who wasn't just a bit bashful. I've lost some of that trait, however—maybe like the fellow who took his girl riding and stood stuttering at her doorway as he was ready to leave, finally confessing that he would have kissed her down near the dark, sandy stretch of roadway if he had not been so bashful."

"Why didn't you?" she asked, and he replied his mouth was full of sand.

"Swaller it, you boob, you need it," she said. "I've swallowed my share, gentlemen."

"We don't advertise Missouri enough. We ought to do like the two men from Kansas did. They were natives about the perfection of their village had attained and consequently asked a visitor if he could suggest any improvements before they left for New Orleans."

"You've got to make it a seaport town," he said.

"How can you bring the sea to Kansas?" they thundered. "We're a thousand miles inland."

"On your way to New Orleans lay a pipe line as you go," he said, and blow as hard at that end as you have at this and you'll have your seaport in 30 minutes."

Chauntauque Reminiscences.
When I was on the Chauntauque platform one summer I was tempted to murder by the man by whom some people received me, a Missourian. They told one story, but I had to tell it the right way for them.

"A Kansas family was getting ready to come into Missouri in the old days. They packed the wagon, whistled for the dog and put out the cat. The little daughter climbed down, ran back into the cabin and got down on her knees. 'Good-by, God,' she said. 'We're going to Missouri.'"

"That's what she said, but not the way she said it. I told them. What she really said was 'Abba, Father, God, we're going to Missouri.'"

Asks for Co-operation.
"My plea tonight has been for the co-operation of you business men, but I don't want it to be the kind that one business man chose when a magician told him he would grant any wish he made with the proviso that his competitor across the street would receive a double portion."

"That fellow rolled and tumbled when the buttons were lost."

"That was the case, I think. My interest was manifested by trying to soothe and quiet her, and to get her to take a new lease on life and better her condition."

After considerable quibbling over definitions of interest, "sympathy" and "affection," Senter said he never had sentiments of love for Mrs. Campbell, although they had become intimate on the occasion of a buggy ride in St. Louis in 1909, and subsequently as well.

CARDINAL OFFICIATED AT HER WEDDING

Miss Loretta Hines, of Evanston, Becomes Bride of Howell Howard of Dayton.



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MISS LORETTA HINES.
MISS LORETTA HINES, daughter of Mr. and Mrs. Edward Hines of Evanston, Ill., was married in the Holy Name Cathedral at Chicago today to Howell Howard of Dayton, O. Cardinal Mundelein of Chicago presided over the ceremony, and Bishop Kelley of Oklahoma celebrated the nuptial mass. Two thousand guests attended the wedding, and the expenditure was estimated at \$100,000.

K S D DURING THE ECLIPSE REACHES DISTANT POINTS

Reception on Loop Reported in West Virginia—New Orleans Picks It Up.

The first report on the special eclipse broadcasting sent out by Radio Station KSD, the St. Louis Post-Dispatch, this morning came from R. L. Fleming, of Blue Creek, West Virginia, who wired that his reception was clear and loud on a loudspeaker and loop.

In the period of special broadcasting Station KSD gave interesting information about the solar eclipse and its cause, and a special device which put on the air a note of unvarying intensity for six minutes before and four minutes following the time of totality.

The object of the restaurant mission was to give radio listeners an opportunity to observe and report as to whether the cutting off of the sun's rays had any appreciable effect on daylight radio reception.

A telegram from Jack Skanson of New Orleans said that from 7:30 to 7:50 a. m. his reception of KSD was exceptionally clear and distinct, but that immediately following maximum totality the signals gradually faded and were lost at 8:12.

All night long, about 5 o'clock he sat bolt upright, clasped his hands and fell back into a sound sleep. At 10 o'clock he met the magician and was asked for his wish.

"I wish I was half dead," he said. "The only business man who benefited from that wish was the undertaker."

He told of two Hebrews who heard Billy Sunday, the evangelist, and engaged in a spirited discussion after his sermon as to the actual existence of hell.

"He asked like where else business could have gone and the admitted Sunday was right," the Governor said.

Gov. Baker branched into the realm of poetry, soft sentimental things about dreams coming true, of service to fellow men, and of the castle one could see in smoke. He is a commanding figure on the platform and one of compelling personality at the banquet.

In serious moments his great voice boomed out, driving his points home with the same hammer force that he used to apply to the spike in a railroad tie in his day as a section hand.

"While the Clock Ticked"

Raphael Sabatini, master of tales of medieval adventure, author of "The Sea Hawk" and "Captain Blood," has written this fast-moving mystery drama of French revolutionary days. This short story of criminal cunning has a surprising ending and it appears next Sunday in the Post-Dispatch Sunday Magazine Section.

DEBATE ON STONE'S NOMINATION SHUTS

Senate Votes to Go Into Executive Session, Which Lasts an Hour.

By the Associated Press. WASHINGTON, Jan. 24.—Public leaders invoked the Senate rules today to shut off a debate on the nomination of Attorney-General Stone to the Supreme Court.

When Senator Hefflin (Ala.), Alabama, one of those who advocated further investigation of the nomination, sought to have Senator Curtis of Kansas, a public leader, make a point of order that such a question could be discussed only in executive session, President Chamberlain objected, but Senator Hefflin insisted that he was opposing the nomination because the Senate was in an effort to go into executive session.

With Senator Overman (N.C.) North Carolina, Hefflin opposed Stone only because of arguments before the Senate. In the Overman case, he involved a litigation affecting a Morgan estate. "That's right," Overman said.

Senator Watson (Rep., Ind.) objected to further observations of that kind, but Senator Reed (D., Miss.) took up the argument. The other side and President Chamberlain ruled that Hefflin could answer the newspaper story.

Objecting again was raised, however, and then the La Follette (Vt.) senator, who had introduced Senator Stone (Rep.), Indiana, joined with the Democrats in an effort to go into executive session.

This was explained as a move to avoid technicalities. It was planned to open the doors later to the discussion and go on to "open executive session."

The motion to close the debate carried, 37 to 25.

After it had been pointed out by a number of Senators that the Senate had decided to postpone consideration of the nomination until next Monday, Senator Hefflin agreed to let the matter go until that time.

At the end of an hour the executive session broke up and the debate proceeded with regular session.

MAN IS STABBED DURING SCUFFLE IN RESTAURANT

Cafe Owner Says Customer Went to Kiss Waitress Who Gave Him Order.

William P. Street, 31, 2525 North Eleventh street, is at city hall with a stab wound in the abdomen suffered at 10 a. m. today in a restaurant at 508 South Jefferson and was taken to the hospital.

The victim is a graduate of the University of Missouri, who was in the city on business. He is alleged to have refused to pay for his meal, and was taken to the hospital.

Richard Kaelaparian, 24, proprietor of the restaurant, told police that the victim had been stabbed in the back by a man who was in a scuffle with the waitress who gave him the order.

Kaelaparian is being held pending the outcome of the victim's wounds, which was pronounced serious.

He denied that there was a scuffle between the victim and the waitress, but he admitted that the victim had been in a scuffle with another man.

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Get the BIG SUNDAY POST-DISPATCH

It Sets the Pace!

FORMER SOLDIER, HIT BY AUTO THAT SPED AWAY, DIES

DEBATE ON STONE'S NOMINATION SHUT OFF

Senate Votes to Go Into Executive Session, Which Lasts an Hour.

By the Associated Press.
WASHINGTON, Jan. 24.—The public debate today to shut off the nomination of Stone to the Supreme Court, which was held in the Senate today, ended in a tie vote of 50 to 50. When Senator Heflin (Dem., Ala.), one of those who had advanced further investigation of the nomination, sought to speak, Senator Curtis (Rep., Kan.), the Republican leader, moved to the point of order that such a question could be discussed only in executive session. President Cummings upheld the objection, but Senator Heflin continued that he wanted to correct a statement in the New York World which said that Stone's nomination was a surprise to the Senate. When Senator Overman (Dem., N. C.), one of those who had opposed Stone only because of his arguments before the Supreme Court in the O'Fallon case, which involved a litigation affecting the Morgan estate, "That's right," said Overman.

Senator Watson (Rep., Ind.), objected to further observations of that kind, but Senator Reed (Dem., Miss.), took up the argument of the other side and President Cummings ruled that Heflin could answer the newspaper story.

Objecting again was raised, however, and then the La Follette insurgents and some others, including Senator Borah (Rep., Idaho), joined with the Democrats in an effort to go into executive session. This was explained as a move to avoid technicalities. It being planned to open the doors later so the discussion could go on in "open executive session."

The motion to close the doors carried, 57 to 36.

After it had been pointed out by a number of Senators that the Senate had decided to postpone consideration of the nomination until next Monday, Senator Heflin agreed to let the matter go over until that time.

At the end of an hour the executive session broke up and the Senate proceeded with regular business.

MAN IS STABBED DURING SCUFFLE IN RESTAURANT

Cafe Owner Says Customer Wanted to Kiss Waitress Who Gave Him Order.

William B. Kelly, 34, 3400 North Eleventh street, is in city hospital with a stab wound in the abdomen, suffered at 10 a. m. today in a restaurant at 208 South Jefferson avenue, when he is alleged to have refused to pay for his breakfast until allowed to kiss the waitress who served him.

Richard Kaelspanian, 24, proprietor of the restaurant, told police of the Eighth District that Kelly was stabbed in a scuffle for a waitress with which he rushed to the assistance of the waitress when Kelly attempted to kiss her. Kelly refused to pay for an order, unless he could embrace the waitress, Kaelspanian said.

Kaelspanian is being held pending the outcome of Kelly's wounds, which was pronounced serious. Kelly denied that there was a scuffle for possession of the knife, alleging that the restaurant proprietor rushed at him and inflicted the wound.

ST. LOUIS POST-DISPATCH

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ani, master of tales of nature, author of "The Captain Blood," has fast-moving mystery with revolutionary days of criminal cunning ending and it appears in the Post-Dispatch Magazine Section.

POST-DISPATCH

It Sets the Pace!

FORMER SOLDIER, KILLED BY AUTO, SPED AWAY, DIES

Patrick J. Lavin, Struck Thursday Night by Speeding Car, Succumbs to Fracture of Skull.

TWO OCCUPANTS OF MACHINE SOUGHT

First Three Numbers of License Plate Given Police—Victim Was to Have Wed in Fall.

DEAD.
Patrick J. Lavin, 35, of 4563 Cote Brillante avenue, Officer Vogler, 8, of 2214 South Fourth street, said today.

INJURED.
Philip Gilbert, 60, 1401 North Tenth street, fractured skull, arms and ribs.

Patrick J. Lavin, 35 years old, of 4563 Cote Brillante avenue, World War veteran and secretary of W. C. McBride, Inc., died from a fracture of the skull and internal injuries last night at the Missouri Baptist Sanitarium. He was injured at 6:15 p. m. Thursday at Easton and McBride avenues, when struck by an automobile containing two men who feloniously fled from the scene.

With the numbers 767 furnished him by witnesses to the accident, the first three numerals on the car, described as a black 1930 Essex, police are searching for the two occupants.

Going at High Rate of Speed.
The driver of the car was going at a high rate of speed when it struck Lavin, who had been waiting at the southeast corner for the very evening traffic to clear his way crossing to the north side of the street.

"Guess I can cross now," Lavin had casually remarked to Mrs. Lavin Smith, 1606 North Euclid avenue, who was standing across the street just as he reached the south side of the car tracks he was struck. Mrs. Smith was about five feet behind him and screamed as the car knocked him about 20 feet.

Mrs. Smith said she had not seen the machine approaching and did not believe that Lavin did. Before going both had looked in traffic from the street and did not observe an approaching car.

The driver, in an effort to avoid the accident, momentarily lost control of the car, which made a complete turn as he applied the brakes and then turned north to Euclid and then turning north in Euclid.

Driver Speeds Away.
Lavin was unconscious when picked up by pedestrians. He was taken to a westbound car approaching the corner, tried to call the driver as he sped away. Mr. Casey, motorman of an eastbound car, said the auto passed his station at a high rate of speed. He furnished police with the first three numerals of the auto license plate.

Lavin had been employed by the late William C. McBride, former capitalist and oil operator, which is incorporated as W. C. McBride. He served overseas with the 135th Division.

Miss Elizabeth Lynch of Chicago, whom Lavin was to have married in the fall, arrived in St. Louis yesterday morning and reached his home before he died. Lavin was a son of the late Patrolman Dominick Lavin. Funeral services will be held from the home of his mother, Mrs. Agnes Lavin, where he resided. He also is survived by two brothers, John and Thomas Lavin, and three sisters, Mrs. Lavin, Mrs. Martin Scannell and Mrs. Edward Doering.

Boy, on Way to School, Killed by Automobile.
Oliver Vogler, 8 years old, son of Mr. and Mrs. Arnold Vogler, 2114 South Fourth street, yesterday morning at 12:45 p. m. yesterday when hit by a motor car driven by Morris Silvermintz, 31, insurance salesman at Seventh boulevard and Ann avenue.

Oliver was crossing from the east to the west side of Seventh boulevard at Ann avenue, and Silvermintz was driving south in Seventh. The boy was returning to Lafayette street. Ninth and Ann avenue from lunch.

Silvermintz, who resides at 1404 Madison avenue, told police the boy ran directly in front of the car as he was driving slowly. He declared he stopped within five feet.

Samuel Green, 2811 Gamble street, corroborated Silvermintz's version. Other witnesses however said the car of Silvermintz's car was 50 feet beyond the boy when he stopped.

Funerary Services When Struck by Truck.
Philip Gilbert, 66 years old, of 1401 North Tenth street, suffered a fracture of the skull, arms and ribs when struck by a laundry truck driven by Tice Gurley, 19, of Page boulevard, at 1 p. m. Thursday at Tenth and O'Fallon streets. He is in a critical condition at city hospital. Gurley told police he was driving slowly east on O'Fallon when Gilbert, crossing from the south to north side of Tenth at Tenth street, stepped into the path of the truck.

WAR VETERAN WHO WAS KILLED BY AUTO



PATRICK J. LAVIN.

BERGDOLL'S CHAUFFEUR GIVES HIMSELF UP

Says He Disagreed With Draft Evader and They Separated in Germany.

By the Associated Press.
PHILADELPHIA, Jan. 24.—Eugene Stecher, chauffeur and companion of Grover Cleveland Bergdoll, millionaire United States Disrupter, said today he had agreed to surrender to the United States authorities here yesterday.

Stecher, who is alleged to have aided Bergdoll in his escape from the United States, was formally placed under arrest on indictments charging conspiracy and harboring a fugitive, and was held in \$10,000 bail by Federal Judge Dickinson. Unable to obtain bond, he was locked up in the County prison.

Asserting he had left Bergdoll in Germany, Stecher said he returned to this country by way of Holland, England and Canada, wandering about Philadelphia for the last ten days unrecognized, with only Mrs. Emma Bergdoll, mother of Grover, aware of his presence here. He said he had traveled under the name of Frank J. Johnson.

In a detailed statement to Assistant United States Attorney Deininger, Stecher said he had repeatedly urged Bergdoll to return to the United States and "face the music" and that their differences on the subject had caused them to separate in Germany two and a half years ago. The last he had seen of Grover, he added, was a few days before he left for this country. This was Eberbach, the scene of an unsuccessful attempt to kidnap Stecher, in which one man was shot and killed by Bergdoll.

Stecher's narrative, Deininger said, gave every incident from the time Stecher was drafted into the army, fled from his military uniform, fled from the Bergdoll mansion at "Winefield, suburb of this city. Stecher's hair, black when he piloted the big racing motor car, now is gray, is gray today, from worry caused by the entire affair, he said.

The first official intimation of Stecher's presence here came to William C. Lynch, an attorney to whom Stecher told his story at the advice of a man in whom he had confided. Lynch communicated with Deininger.

The maximum penalty for the offense with which Stecher is charged is 10 years' imprisonment or \$10,000 fine, or both.

Despite Stecher's denial, some Federal officials expressed the belief that his return was in the nature of a "feeder" for Bergdoll, who was said to have wanted to surrender for some time.

Mrs. Emma C. Bergdoll, mother of the fugitive, said that he had promised to come back "before the last action," but now said she did not know when he would return if ever. Mrs. Bergdoll added that Grover was living in Eberbach; that she had received a letter from him a few days ago, but that he had not mentioned anything about returning to America or of Stecher's plans to surrender. She declined to say whether she would assist Stecher in his legal fight.

TWO CHILDREN DIE FROM BURNS SUFFERED AT PLAY

Boy Fell Into Tub of Hot Soap-suds—Girl Overturned Pan of Scalding Water.

Two children died at the City Hospital, last night, from scalds and burns suffered at play in their home.

Robert Fay, 4-year-old son of Jacob and Catherine Fay of 1804 Menard street, died at 3 a. m. On Thursday evening, he was playing in the kitchen when his mother had prepared a tub of soap suds. He fell into the tub.

Heleen Baldrige, 17-months-old daughter of Steve and Lillian Baldrige, of 1455 Madison street, died about 7 p. m. from the effect of burns and pneumonia which followed. Wednesday evening her father had placed a pan of hot water on the kitchen sink, preparatory to washing the kitchen cabinet. The child reached up and overturned the pan.

PRIEST FOUND SANE AFTER TALE OF HEAVY DRINKING

Father Joseph Casey, Formerly Assistant in Visitation Parish, Relates Experience in Philippines.

It was a hard-drinking outfit, the priest continued, "until one time about 1902 I got all stowed up and sent a telegram of resignation to Washington. I had decided the army was no place for a priest. Later I went to Washington and resigned in a proper manner."

But the craving for drink persisted, Father Casey related, and occasionally a nervous breakdown resulted. It was true, he said, that after he left his pastorate in Mexico, Mo., in 1917, and went to New York, he was for a time in Bellevue Hospital. He was out confined, however, for mental aberrations charged by his brother, Louis Casey, who instituted the proceedings here to have the priest adjudged insane.

"Ask anybody who was around the Knickerbocker bar in those days what the trouble was," the priest asserted.

Set Fire in Hospital.
Then there was the time when he was confined at Alexian Brothers' Hospital and set fire to some rubbish in a waste basket. "I had been there for days," he related. "I wanted to get out and I did. The fire didn't amount to anything; I could have stepped on it and put it out. Anyway, I was released next day."

A parishioner at Catawissa, Mo., his latest charge and whence last November he was brought to St. Louis and confined in the City Hospital and later the "City Sanitarium," was excommunicated automatically, he explained, when he struck the priest. The parishioner, cashier of a bank, testified he had gone to the priest's residence to remonstrate with him about excessive drinking.

"Did you learn to drink in France?" asked Attorney Thomas Dwyer, counsel for the brother. "No, I didn't go to France," was the reply. "I wouldn't fight for England."

Louis Casey related that his brother was 45 years old and had studied for the priesthood in Rome, returning to this country about 1898, when he suffered his first breakdown. He returned to Rome and finished his studies, graduating in 1902 or 1903. After this he became a chaplain in the army and in the succeeding years held the "astorates mentioned."

Committed to Sanitariums.
He described various breakdowns which the brother suffered at different times in various places in Alexian Brothers' Hospital, St. Vincent's Infirmary, St. Mary's Infirmary and Sacred Heart Hospital in Milwaukee.

Last November, he narrated, he went to Catawissa with Detectives Roach and Frank Dempsey, brother of Father Tim Dempsey, and found the priest in the care of several members of the congregation. He said the priest agreed to come to St. Louis and then began to talk foolishly, asserting that the Archbishop had been elevated in place. Then, he said, he was going to leave the church and get married.

Jury Finds Him Sane.
Father Joseph Collins, priest of the Visitation Parish, testified he had known and loved his brother priest since the latter's school days. He said Father Casey came to him in 1921 and lamented that the Archbishop would not assign him to a parish, and it was then, he related, that he made Father Casey his assistant. He said he knew Father Casey's nervous spells and that he had been able to "right him" in a day or two.

Physicians at the city hospital and city sanitarium testified the priest was suffering from a mental aberration with lucid intervals. But the priest, who appeared in partial priestly vestments, proved a better witness, and the jury shortly returned a verdict adjudging him of sound mind.

ACTION TO CHECK FURNITURE SALES FROM RESIDENCES

Four Accused of Posing in Advertisements as Home Owners Forced to Sell Goods Cheap.

Complaints charging four persons with masquerading in advertisements as home owners forced to dispose at bargain prices of household goods, when they were, in fact, furniture dealers, have been filed by the City Counselor, at the instance of the Better Business Bureau.

The four, who will be given a hearing in police court Feb. 6, are Lewis J. Lewis, 1626A Delmar boulevard; Mrs. Jettie G. Cooper, 5219 Cates avenue; Oliver East, 2009 Morgan street, and Samuel Schukar, 2142 Easton avenue.

They are charged with violation of a city ordinance which requires that all persons who engage in the business of selling furniture, goods, wares, merchandise, securities, service or real estate from their residences, through advertisements, must indicate in the advertisements that they are dealers.

Following complaints from persons who claimed to have purchased merchandise, misrepresented as charged, by the four, residential dealers, who posed as individual owners and did not disclose they were in business, the Better Business Bureau last July began an investigation. It was found that some 25 dealers were operating from residences in various parts of St. Louis, and advertising in the classified sections of newspapers without disclosing their true status as dealers. The attention directed to the ordinance, a majority modified their advertising accordingly, but others continued to violate the law.

When the bureau discovered that dealers who advertised they were "compelled to leave the city at once" continued at the old address, or merely moved to another neighborhood. As fast as their goods, usually furniture, were "sacrificed," more arrived to fill the vacancies.

Pretentious Residences.
Some of the residences from which dealers operated in disguise were rather pretentious. "Shoppers" at one Maple avenue residence were informed it cost \$40,000.

Another scheme was renting a residence, usually a new one, with new furniture, advertising and selling the furnishings, and then moving on to another apartment, to repeat. During the housing shortage, both the leases and furnishings of apartments were sold by some operators, usually at exorbitant prices.

A special representative of the Better Business Bureau is directing true dealers to disclose their true status in advertisements to "residential dealers." Similar action as regards "residential dealers" in the automobile and real estate fields will follow.

TWO BREWERS FINED \$1500 EACH ON DRY LAW CHARGE

Jacob M. Fishback, St. Charles and Albert Schorr, St. Louis, Plead Guilty.

Jacob Fishback, former president of the Fishback Brewing Co. of St. Charles, was fined \$1500 by Federal Judge Paris today, on his plea of guilty to violating the Volstead act. Fishback was charged with manufacturing and transporting beer of more than legal content on Dec. 19, 1923.

A similar charge against his son, John Fishback, who is now operating the brewery, was dismissed on the Government's announcement that he was not present and was not aware that beer was being made. A similar execution of \$750 against the brewery was stayed.

Albert Schorr, vice president of the Schorr-Kolkschneider Brewing Co., pleaded guilty to the same offense and was fined \$1500. His plea of guilty followed that of similar pleas made by five other officials of the brewery. The total of \$9000 by Judge Paris 10 days ago. Schorr was ill at the time.

GEN. KURPATKIN, FORMER RUSSIAN COMMANDER, DIES

Soviet News Agency Announces Death of Officer Who Led Forces in War With Japan.

MOSCOW, Jan. 23.—The death of Gen. Kuropatkin, Commander-in-Chief of the Russian armies in the Russo-Japanese War, is announced by the official Soviet news agency. The general, who was 80 years of age, died at Shenshurino, in the Pskov district.

Regarded as one of the greatest military leaders ever developed in Russia, Gen. Alexei Kuropatkin was supreme commander of the Czar's land forces in the Russo-Japanese War, but he was held responsible for Russia's loss of the war when he met a disastrous defeat in the battle of Mukden in 1905.

WOUNDS FATAL TO WATCHMAN WHO KILLED ROBBER

Frank Wilmes Dies in Hospital as Result of Fight When He Was Held Up.

Frank Wilmes, private watchman, who fought a revolver duel with Charles R. Barger, ex-convict and slayer of two men, when the latter attempted to hold him up at Waverly place and Lafayette avenue, Thursday night, died at city hospital at 1:30 p. m. today from a bullet wound in the abdomen.

The bullet, which caused five intestinal perforations, was removed in an operation at the hospital several hours after the shooting. Wilmes, who was 35 years old, rallied immediately, but today complications set in and death followed.

Barger, who was 42 years old, and lived at 1201 Lafayette avenue with his wife and 9-year-old daughter, died at city hospital early yesterday from two wounds in the abdomen.

Fund for Wilmes.
A fund of \$50, to be turned over to Wilmes in recognition of his courage, was sent to the Post-Dispatch yesterday by three business men, who expressed a wish that others might follow their example in rewarding a citizen who had risked his life in ridding St. Louis of a holdup man.

The donors of the reward, each contributing \$10, are: John Nooter, president of the Nooter Boiler Works, 1400 South Second street; I. N. Brown, president of the Brown Machinery Co., 2323 North Ninth street; and a third man who requested that his name be withheld.

"We often carry payrolls and the robber Wilmes killed may have held up one of us," the men starting the fund said. "It is our position owe Wilmes something for the service he rendered in adding the city of a dangerous criminal."

Wilmes, a special investigator for the American Express Co., and a licensed watchman, met Barger's command to hold up his hands by drawing his revolver. Both men fired four or five shot each at close range, and were found on the sidewalk with revolvers clutched in their hands.

Wilmes was single and lived at 1410A Grattan street with his parents, Mr. and Mrs. Frank Wilmes. The parents were partially disabled by Barger's shooting. They were monthly for support. They and other members of the family maintained an unbroken vigil at the hospital since the shooting.

WIDOW, 82, OUT OF \$12,000

Man Is Under \$10,000 Bond on Charge Growing Out of Stock Sales.

ELCA, Ill., Jan. 24.—H. O. Hayer, 40, Chicago bond salesman residing in Rogers Park, is under \$10,000 bonds here today charged with fleeing Mrs. Almira Giddings, 82-year-old widow, out of her life savings of more than \$12,000.

According to the story told police by Mrs. Giddings, the salesman secured possession of \$7300 worth of her stock by telling her it would be necessary for the certificates to be filed in the Chicago office of the company, if she was to participate in a rich dividend about to be declared by the company.

O'Hayer admitted at the court hearing that he had disposed of the \$7300 worth of stock for \$4000. He begged the Court for an opportunity to make the loss good.

The secured \$4700, the salesman secured, Mrs. Giddings charges, by exchanging worthless stock with her for bonafide certificates which he later disposed of.

EXCELSIOR SPRINGS BANK PRESIDENT IS ARRESTED

Warrant Charges B. M. Meservey With Misapplication of Depository Funds.

By the Associated Press.
EXCELSIOR, SPRINGS, Mo., Jan. 24.—Beth M. Meservey, president of the First National Bank, was arrested this afternoon on a warrant charging misapplication of the bank's funds, false entry in the books of the bank and making a false report to the Bank Examiner. He will be taken to Kansas City for arraignment.

The banker was awaiting the deputy, who made the arrest at the home of L. E. Bates, lawyer here, who had been employed as attorney for the bank. After a conference with E. L. Chapman, Bank Examiner, Meservey was bundled into a motor car and was started off for Kansas City.

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What It Means to Call DELMAR... When You Want a Taxicab

You are assured of a Superior Car, at rates that are no higher.

You receive service in which the driver has a personal interest.

Comfort COLUMBIA CAB COMPANY "Every Columbia Chauffeur is a Stockholder"

J. M. CODY AND TWO OTHERS ARRESTED IN RAID ON SALOON

Man Who Served Short Term for Dry Law Violation Again Faces Charges.

Joseph M. Cody, who with Irvin Lee, his partner in the operation of a bar in the Central National Bank Building, served a short jail sentence last year for violation of the prohibition law, was arrested by Federal Prohibition Agents last night in a raid on a bar at 4944 Delmar boulevard, of which, it is alleged, Cody is the proprietor.

The agents arrested Cody, along with Willie Hiller, bartender, and a third man in the place, after they claim, to have found a quantity of beer, whiskey and gin under the bar and in the icebox. Cody is said to have made no statement regarding the ownership of the place, but, according to the agents, a receipt emitted by the cash register in the sale was recorded before the name "Cody" was written on the receipt and the other two men with possession of liquor were issued today.

Cody and Lee were sentenced to six months each in the Warren County Jail by Federal Judge Davis last year following one of the numerous raids on their bar in which liquor was found. After serving two months, Lee was released because of the serious illness of his wife. Cody was released along with him, Judge Davis considering that it would be unfair to release one partner and not the other.

ECLIPSE REGARDED AS HERALDING END OF WORLD

Group of Adventists Persist in Believing Woman Received Divine Message Fixing Date as Feb. 6.

WASHINGTON, Jan. 24.—About 20 Seventh Day Adventists in Washington and groups in Baltimore, Boston, Los Angeles and other cities, expect the world to come to an end on Feb. 6. The religious sect, which has been in existence for over 100 years, and its adherents are regarded as heralding liquidation of all worldly affairs.

The devout believers in the approaching dissolution of the world are followers of Mrs. Mary W. Miller, now in California, who more than a year ago announced she had received a divine message, saying: "My Son will return on Feb. 6, 1925. Proclaim it, proclaim it from the skies."

This injunction was literally observed in California where airplanes were employed to drop tracts announcing just when this revolutionary event was going to happen.

MOTION TO QUASH OIL LEASE INDICTMENTS URGED

Counsel for the Two Dohneys, Fall and Sinclair Heard in District of Columbia Supreme Court.

WASHINGTON, Jan. 24.—Contending that the presence of District Attorney General Gordon and Assistant Attorney General Pagan in the grand jury room during the taking of testimony was illegal, counsel for Edward L. Dohney, Edward L. Dohney Jr. and Albert B. Fall and Harry F. Sinclair argued before the District of Columbia Supreme Court yesterday for the quashing of indictments growing out of the leasing of the oil reserve.

Before court adjourned, a brief by Frederick R. Kellogg of New York, attorney for the Dohneys, was submitted, contending that Senator W. A. Rorer, chief prosecutor in the Senate inquiry, was in contempt of court when he made a radio speech dealing with the oil investigation last May while the grand jury was considering the cases.

THRILL FOR INCOME TAXPAYERS

By the Associated Press.
WASHINGTON, Jan. 24.—The humble taxpayer was given an unexpected thrill today by the Internal Revenue Bureau. In a formal statement the bureau gave the country this advice: "Do not pay more income tax than you owe."

The unusual warning was caused by the fact that the first of the income tax returns to come to hand revealed a widespread failure to deduct the 25 per cent deduction allowed by the new law to earned income.

\$50,000 Fire at Galesburg.

By the Associated Press.
GALESBURG, Ill., Jan. 24.—The Ogilvie Furniture Co. building on a downtown corner was damaged by fire which started at 5 o'clock this morning. Fire and water ruined the stock. Omer N. Custer, State Treasurer, owns the building. Ogilvie has been conducting a closing-out sale and the building was to be occupied by the Illinois Power and Light Corporation. The loss will be approximately \$50,000.

John W. Davis Returns.

By the Associated Press.
NEW YORK, Jan. 24.—John W. Davis, defeated Democratic candidate in the last presidential election, returned today on the Steamship Paris after two months abroad with Mrs. Davis.

WOMAN WOUNDED BY ROBBER WHO TRIED TO RECOVER

Mrs. Grace Hankemeyer Shot in Attempted Holdup of Box Company Office.

Mrs. Grace Hankemeyer, a stenographer who was shot through the left shoulder by one of three masked robbers during an attempted payroll holdup at the office of the Lay-Lange Box Co., 223 Russell avenue, at 1:30 p. m. yesterday, has an excellent chance for recovery, physicians at city hospital announced today.

Mrs. Hankemeyer was in the second-floor office with Edward L. Lange, 4105 Flora place, treasurer of the company, when the robbers entered with d. w. revolvers and ordered her and Lange to hold up their hands. Instead of complying Mrs. Hankemeyer made a dash for a door leading into the factory. As she reached the door the robber closest to her fired once, Mrs. Hankemeyer staggered through the doorway and into the factory, where she collapsed.

Nature of Her Wound.
At the hospital it was found Mrs. Hankemeyer had been wounded through the upper part of the body on the left side. The bullet entered near the left shoulder blade and emerged from the chest. Mrs. Hankemeyer was thrown into severe shock immediately after being wounded, but was reported resting easily today. The bullet is not believed to have more than grazed the upper lobe of the left lung, and, barring complications, the wound is not expected to prove fatal, physicians said.

The robbers became frightened after shooting Mrs. Hankemeyer and prepared to flee without obtaining any part of the payroll they sought. One of them, standing near Lange, swung his revolver down on top of Lange's head and the treasurer fell back unconscious in his chair. The robbers then fled down the steps and drove away in a black touring car, in which the fourth man is believed to have been waiting.

Estimated \$1000 Payroll.
Lange, after being revived, told police there was a \$1000 payroll in the office when the robbers entered, secreted in odd places instead of being kept in the safe. The firm has feared holding Lange said, and employed this precaution on pay day.

Mrs. Hankemeyer is 27 years old and resides at 813A Ha-nen street with her husband, Vincent Hankemeyer, a clerk employed at the Graham Paper Co.

HE EXPECTS EARTHQUAKES

Astronomer Says Eclipse Will Mark Disturbances.

SAN FRANCISCO, Jan. 24.—Earthquakes and general weather disturbances, the latter especially marked in the western portion of the United States, will follow this morning's eclipse of the sun, according to Father Jerome S. Ricard, astronomer at Santa Clara University.

Confirming a prediction made several weeks ago, Father Ricard, who was in the city today, said that his observations at the Santa Clara observatory during the past 48 hours convinced him his earlier prediction would prove correct. The earthquake shocks will be strongest at about 26 degrees north of the equator, and may be felt on either the Atlantic or Pacific coasts, he said.

Bread at Two Cents a Loaf.
BOSTON, Jan. 24.—Bread at 2 cents a loaf went on sale in Boston yesterday. Baked fresh at the Fort Street Baking Boxes, it was sold in 16-ounce loaves at the Army Quartermaster sales store. The price, according to the Quartermaster Department, is what it costs to make the bread. The stores at the Quartermaster Department are sold to members of the military, naval service and coast guard services.

VEILED PROPHET QUEEN OF 1923 TO MARRY

Miss Grace Whitelaw Wallace Announces Betrothal to Marion Niedringhaus.

The engagement of Miss Grace Whitelaw Wallace, daughter of Mr. and Mrs. Mahlon Brookings Wallace of the Price road, and Marion Niedringhaus, son of Mr. and Mrs. George W. Niedringhaus of 19 Westmoreland place, was announced today at a tea for 75 guests at the Wallace home.

Miss Wallace was chosen Queen of the Veiled Prophet ball in 1923. She is a graduate of Mary Institute and Holton Arms, a fashionable finishing school in Washington, D. C. and was presented to society the year of her coronation. She is a member of the Imperial and Junior League. Her brother, Mahlon B. Wallace Jr., married Miss Audrey Faust a few weeks ago.

Mr. Niedringhaus is an alumnus of the University of Virginia, and during the war served in the navy. He is a member of the Imperial and the Racquet and St. Louis Country clubs.

The young women serving this afternoon were Misses Janet Collins, Eleanor Simmons, Frances Collins, Emily Catlin Shipley, Louise Bemis, Elizabeth Ludyte, Lucy Terry and Margaret Caridine.

The guests included a group of the young married set, the young women contemporaries of Miss Wallace, with their escorts, and a few friends of her parents.

ABANDONS COMPROMISE EFFORT ON RAIL LEGISLATION

Senator Cummings Says Neither Managers Nor Employees Will Agree to Conference.

By the Associated Press.
WASHINGTON, Jan. 24.—Senator Cummings, Republican, Iowa, announced after a conference today with President Coolidge that he had abandoned efforts at a compromise between railroad managers and employees on legislation similar to the Howell-Barkley bill to deal with railroad labor disputes. Neither side, he said, has been willing to agree to a conference.

Action on the Howell-Barkley bill, however, has been postponed for this session.

Railroad Merger Progressing.

By the Associated Press.
NEW YORK, Jan. 24.—The \$1,500,000,000 "Nickel Plate" merger project of the Van Sweringen interests will be ready to lay before the Interstate Commerce Commission for approval by the end of March, it was indicated yesterday when directors of the Erie Railroad Co. accepted the revised lease which will bring the present Erie into the new system, and called a special meeting of stockholders for March 25 to ratify the plan.



is not good that sputters, but a fried fish, covered with a delightful Premier Salad Dressing sauce, is one of the best things you can eat.

Premier Salad Dressing Recipe book on request to R. H. Leggett & Co., New York TRY PREMIER COFFEE TOO

A New Cable Metal-Permalloy.

Strips of permalloy 10,000 miles long will increase the traffic capacity of a cable five times when wrapped around its copper core. The Post-Dispatch Sunday Magazine tells about this new discovery for speeding cable messages which marks the first important change in cable construction in 66 years.

Get the BIG SUNDAY POST-DISPATCH

It Sets the Pace!

ADVERTISEMENT

666

40 TO 8

—By Ken Kling

FLINNERS ARE USED FOR DELIVERING EVERYTHING BUT MILK! ONE COMPANY TRIED IT OUT BUT THE CUSTOMERS PICKED WHEN THEY RECEIVED A BOTTLE OF BUTTER!



POOR SAMP! I'M GONNA BET 3 BUCKS ON VOLANTE AND 3 ON BEACH TALK TODAY AN' SHOW HIM THAT THEY CAN BEATEN!

Billikens Meet Rockhurst Five

Kapl, Stanton and O'Toole May Be Unable to Play in Game Tonight.

Minus possibly three of their first string men due to injuries suffered on their Northern road trip, the St. Louis University basketball team will meet the Rockhurst College quint of Kansas City at the St. Louis University High School gym, Kingshighway and Oakland, at 8 o'clock, tonight. A dance will follow the contest.

At Kapl, forward, and Tom Stanton and Jack O'Toole, guards, may be missing from the Billikens lineup. All have, painful but not serious injuries and may be back in a week.

Tonight's contest will be the second home appearance of Savare's men, who defeated Hanover College on the local floor. The Billikens have lost only one game so far and won five.

The game will be played at Kansas City Feb. 27. The Billikens will play Rola Jan. 31, a return game with Indiana Central Normal on Feb. 4. Deputy U. of Chicago will call for a return match Feb. 6 and then the schedule calls for another road trip through Missouri.

LUIS FIRPO ARRESTED BY TRAFFIC OFFICER

PARIS, Jan. 24.—Luis Firpo, Argentine fighter, was arrested today by traffic police because his British automobile license did not conform to French specifications.

Jonnard Starts Training

NASHVILLE, Tenn., Jan. 24.—Claude Jonnard, giant pitcher, left here last night for Hot Springs, Ark., for a 10-day preliminary training before going to the New York National League team's camp.

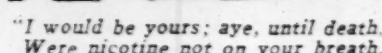
bla. Countess, Golden Wines also ran. The fifth race on the card was declared off with no substitute.

SIXTH RACE, 1-year-olds and up, claiming \$500, mile and 70 yards—Dolly Gaffney, 102 (Thompson), 7 to 1; 1 to 2; 1 to 3; 1 to 4; 1 to 5; 1 to 6; 1 to 7; 1 to 8; 1 to 9; 1 to 10; 1 to 11; 1 to 12; 1 to 13; 1 to 14; 1 to 15; 1 to 16; 1 to 17; 1 to 18; 1 to 19; 1 to 20; 1 to 21; 1 to 22; 1 to 23; 1 to 24; 1 to 25; 1 to 26; 1 to 27; 1 to 28; 1 to 29; 1 to 30; 1 to 31; 1 to 32; 1 to 33; 1 to 34; 1 to 35; 1 to 36; 1 to 37; 1 to 38; 1 to 39; 1 to 40; 1 to 41; 1 to 42; 1 to 43; 1 to 44; 1 to 45; 1 to 46; 1 to 47; 1 to 48; 1 to 49; 1 to 50; 1 to 51; 1 to 52; 1 to 53; 1 to 54; 1 to 55; 1 to 56; 1 to 57; 1 to 58; 1 to 59; 1 to 60; 1 to 61; 1 to 62; 1 to 63; 1 to 64; 1 to 65; 1 to 66; 1 to 67; 1 to 68; 1 to 69; 1 to 70; 1 to 71; 1 to 72; 1 to 73; 1 to 74; 1 to 75; 1 to 76; 1 to 77; 1 to 78; 1 to 79; 1 to 80; 1 to 81; 1 to 82; 1 to 83; 1 to 84; 1 to 85; 1 to 86; 1 to 87; 1 to 88; 1 to 89; 1 to 90; 1 to 91; 1 to 92; 1 to 93; 1 to 94; 1 to 95; 1 to 96; 1 to 97; 1 to 98; 1 to 99; 1 to 100; 1 to 101; 1 to 102; 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1 to 1185; 1 to 1186; 1 to 1187; 1 to 1188; 1 to 1189; 1 to 1190; 1 to 1191; 1 to 1192; 1 to 1193; 1 to 1194; 1 to 1195; 1 to 1196; 1 to 1197; 1 to 1198; 1 to 1199; 1 to 1200; 1 to 1201; 1 to 1202; 1 to 1203; 1 to 1204; 1 to 1205; 1 to 1206; 1 to 1207; 1 to 1208; 1 to 1209; 1 to 1210; 1 to 1211; 1 to 1212; 1 to 1213; 1 to 1214; 1 to 1215; 1 to 1216; 1 to 1217; 1 to 1218; 1 to 1219; 1 to 1220; 1 to 1221; 1 to 1222; 1 to 1223; 1 to 1224; 1 to 1225; 1 to 1226; 1 to 1227; 1 to 1228; 1 to 1229; 1 to 1230; 1 to 1231; 1 to 1232; 1 to 1233; 1 to 1234; 1 to 1235; 1 to 1236; 1 to 1237; 1 to 1238; 1 to 1239; 1 to 1240; 1 to 1241; 1 to 1242; 1 to 1243; 1 to 1244; 1 to 1245; 1 to 1246; 1 to 1247; 1 to 1248; 1 to 1249; 1 to 1250; 1 to 1251; 1 to 1252; 1 to 1253; 1 to 1254; 1 to 1255; 1 to 1256; 1 to 1257; 1 to 1258; 1 to 1259; 1 to 1260; 1 to 1261; 1 to 1262; 1 to 1263; 1 to 1264; 1 to 1265; 1 to 1266; 1 to 1267; 1 to 1268; 1 to 1269; 1 to 1270; 1 to 1271; 1 to 1272; 1 to 1273; 1 to 1274; 1 to 1275; 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1 to 1367; 1 to 1368; 1 to 1369; 1 to 1370; 1 to 1371; 1 to 1372

HUGHES REPLIES INFORMALLY TO FRENCH DEBT NOTE

The Wise Virgin

Evening, veranda, rocking chair, me. Mosquito



Studies in Judaism

Tomlinson in 1

"Love is the keynote. Annihilate

he South Seas

May his enchantment endure.—

Aldrich had spent many gay nights in his boyhood with the group at Pfaff's, and had doubtless made a hero of the dashing O'Brien in common with most of the circle. Much later, he became the editor of *The Atlantic Monthly*, a position that would

audience are ready, and it remains only for the un-

By Dorothy Whittis.
THE THUNDERING HERD
 (Harper's) is Zane Grey's

disappeared. This curious "p
d not very flattering chapter of

"Memoirs of the Foreign
an," by M. M.; Knopf. Wit
roduction by D. H. Lawr
ho met the author a year be
1920, he took his own life

eachy," inscribed to his

CLIFTON JOHNSON, in writing Maxim's biography "The

by Simon A. Blackmore, S. J.

of Woodrow Wilson were? My favorite reading has always been that of American history and biography. I really do not believe I can recall a solitary instance in

at she made to us in the hour

at she made to us in the hour

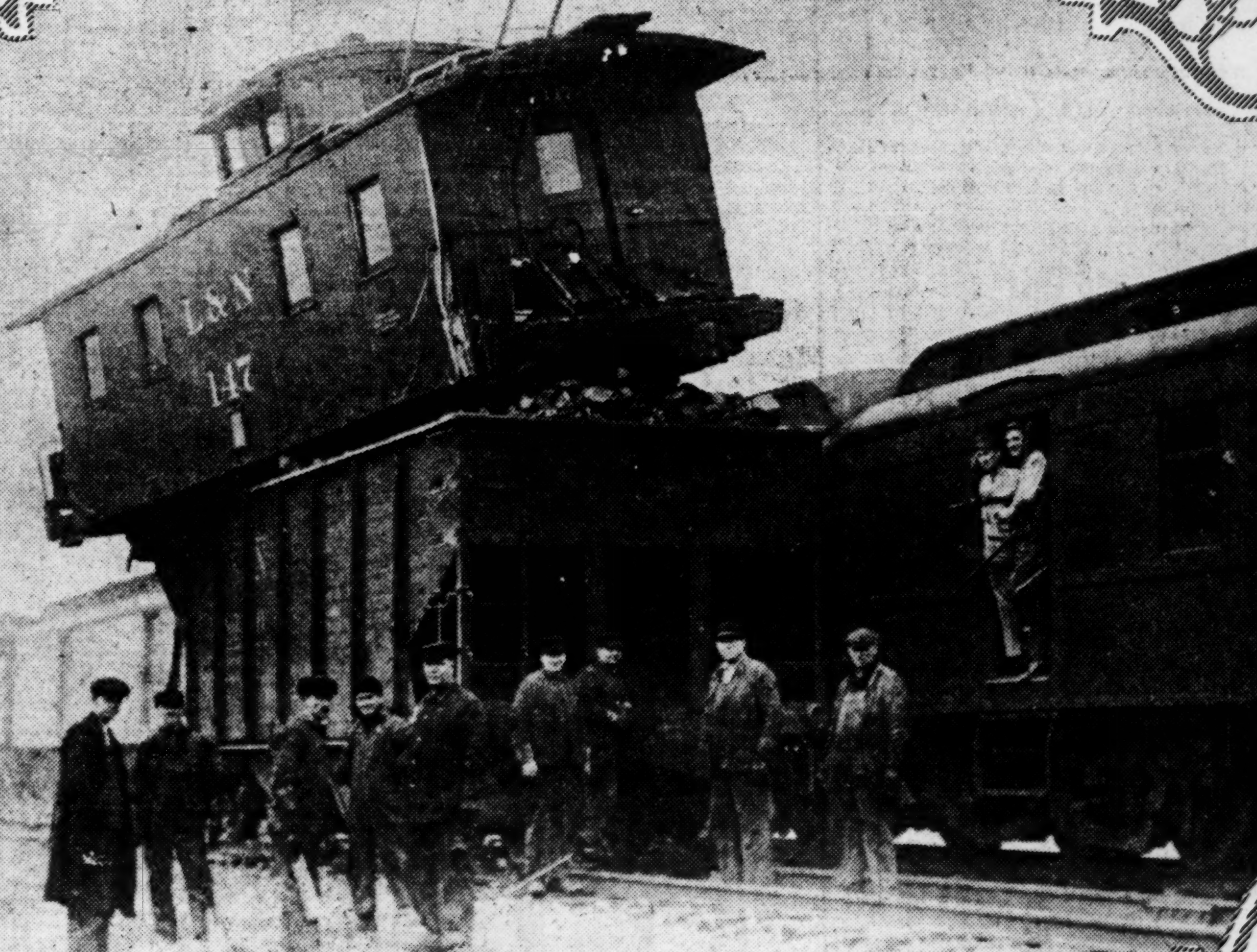
TO PROSECUTE GIRL SLAYER



Miss Teresa Meikle, woman prosecutor of San Francisco, who will very likely be in charge of the trial of 16-year-old Dorothy Ellingson, accused of murdering her mother.

—International Newsreel Photo

GOING UP



TO HEAD BIG GUM CONCERN



Philip K. Wrigley of Chicago, 29 years old, who will be elected president of the William Wrigley Jr. Co. at the annual stockholders' meeting next month, to succeed his father, William Wrigley Jr.

—Underwood & Underwood

"MA" FERGUSON'S NEW HOME



The Governor's mansion at Austin, Tex., overlooking the Capitol grounds.

—P. A. Photo

FATHER CHARGED
WITH KILLING CHILD

—International Newsreel Photo

"EVIL SPIRITS" IN INDIA



A group of gigantic and grotesque figures symbolic of evil spirits, which were destroyed by troops at the religious ceremony of Ram Leela's enemies of the gods at Kashmir, India.

START FLIGHT
ACROSS NORTH AFRICA

In two powerful French airplanes, Col. de Goys de Mazeray (left) and Capt. Pelletier D'Oisy (right), noted French aviators, have started to fly across North Africa. The itinerary, as laid out, covers 10,000 miles.

—P. A. Photo

DIAMOND
WEDDING
DAY

The Earl of Coventry who, on Jan. 25, will celebrate the sixtieth anniversary of his wedding to Lady Blanche Craven, daughter of the second Earl of Craven. He is the dean of the English Jockey Club.

—Keystone View Co.

NEW AMPHIBIOUS PLANE



H. Fred Heckert of McCook Field, Grover Loening airplane designer and builder; and Lieut. W. H. Brookley, pilot, at Bolling Field, near Washington, after the first trial flight of the new amphibious plane built by Loening. This plane is equipped to make landings either on water or on land.

—International Newsreel Photo

OUT-PONZIED
PONZI

Moe Turman, alleged to have been the founder and chief figure in the Equity Financial Service Corporation in New York, through which thousands of investors are believed to have been mulcted of their savings.

—International Newsreel Photo

Butter, Eggs and Poultry

ST. LOUIS BUTTER, EGG AND POULTRY EXCHANGE Jan. 24—St. Louis commission houses today sold the following prices to farmers and country shippers for brand lots of the various articles small returns as follows (quoted in cents):

BUTTER—Creamery, country, 30c; standard, 30c; first, 32c; second, 30c; third, 28c; fourth, 26c.

EGGS—Fresh, 24c; old, 22c; small, 20c; large, 22c.

POULTRY—Turkeys, 10c; chickens, 8c; ducks, 6c; geese, 4c.

VEALS—100 lb. live, 10c; 200 lb. live, 12c; 300 lb. live, 14c.

PORK—Ham, 10c; bacon, 8c; lard, 6c.

CORN—Yellow, 4c; white, 5c.

WHEAT—Hard, 6c; soft, 5c.

BARLEY—2-row, 4c; 6-row, 5c.

OATS—White, 3c; red, 4c.

RICE—Long-grain, 6c; short-grain, 7c.

SUGAR—Cane, 10c; beet, 12c.

COFFEE—Arabica, 15c; Robusta, 12c.

TEA—China, 20c; India, 15c.

SPICES—Pepper, 10c; cloves, 12c.

FRUITS—Apples, 10c; oranges, 12c.

VEGETABLES—Potatoes, 5c; onions, 4c.

FISH—Cod, 10c; salmon, 12c.

MEATS—Beef, 10c; pork, 8c.

DRIED MEATS—Ham, 10c; bacon, 8c.

CANNED GOODS—Tomatoes, 10c; beans, 8c.

BREAD—White, 5c; whole wheat, 6c.

PAstry—Cakes, 10c; pies, 12c.

ICE—Block, 5c; crushed, 6c.

FUEL—Coal, 10c; oil, 12c.

TRANSPORT—Freight, 10c; passenger, 12c.

ENTERTAINMENT—Theater, 10c; concert, 12c.

RECREATION—Amusement park, 10c; sports, 12c.

CLOTHING—Suits, 10c; dresses, 12c.

SHOES—Men's, 10c; women's, 12c.

JEWELRY—Diamonds, 10c; pearls, 12c.

WATCHES—Pocket, 10c; wrist, 12c.

GUNS—Revolver, 10c; rifle, 12c.

CAMERAS—Box, 10c; rangefinder, 12c.

TELEPHONES—Home, 10c; office, 12c.

RADIO—Set, 10c; speaker, 12c.

RECORDS—Gramophone, 10c; electric, 12c.

MOVIES—Film, 10c; prints, 12c.

BOOKS—Fiction, 10c; non-fiction, 12c.

NEWSPAPERS—Daily, 10c; weekly, 12c.

MAGAZINES—Entertainment, 10c; news, 12c.

COMICS—Strip, 10c; book, 12c.

GAMES—Board, 10c; card, 12c.

TOYS—Dolls, 10c; cars, 12c.

SPORTS—Baseball, 10c; football, 12c.

HOLIDAYS—Christmas, 10c; New Year, 12c.

ANNIVERSARIES—Wedding, 10c; birthday, 12c.

FUNERAL—Coffin, 10c; service, 12c.

MARRIAGE—Ceremony, 10c; reception, 12c.

BAPTISM—Service, 10c; godparents, 12c.

CONFIRMATION—Service, 10c; sponsors, 12c.

FIRST COMMUNION—Service, 10c; hosts, 12c.

BAR MITZVAH—Service, 10c; gifts, 12c.

BARATZ—Service, 10c; feast, 12c.

WEDDING—Ceremony, 10c; reception, 12c.

RECESSION—Service, 10c; gifts, 12c.

FUNERAL—Service, 10c; burial, 12c.

MARRIAGE—Ceremony, 10c; reception, 12c.

BAPTISM—Service, 10c; godparents, 12c.

CONFIRMATION—Service, 10c; sponsors, 12c.

FIRST COMMUNION—Service, 10c; hosts, 12c.

BAR MITZVAH—Service, 10c; gifts, 12c.

BARATZ—Service, 10c; feast, 12c.

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FUNERAL—Service, 10c; burial, 12c.

MARRIAGE—Ceremony, 10c; reception, 12c.

BAPTISM—Service, 10c; godparents, 12c.

CONFIRMATION—Service, 10c; sponsors, 12c.

FIRST COMMUNION—Service, 10c; hosts, 12c.

BAR MITZVAH—Service, 10c; gifts, 12c.

BARATZ—Service, 10c; feast, 12c.

WEDDING—Ceremony, 10c; reception, 12c.

RECESSION—Service, 10c; gifts, 12c.

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The Man on the Sandbox by L. C. Adams

IN TEXAS.

O H, the women are on top
In Texas.
The stuff is off with Pop
In Texas.
While the men may wear the
pants,
It's apparent at a glance,
That they haven't got a chance
In Texas.

Mere man, the women say,
In Texas,
Gets merer every day.
In Texas.
With reverential awe
They are all regarding Ma,
But they never think of Pa
In Texas.

Yes, woman is supreme,
In Texas.
And that's no idle dream,
In Texas.
The offices she fills
With furbelows and frills
But Dad still pays the bill
In Texas.

TOO TRUE.

Our representative at the International Opium Conference seems to have got his dope mixed.

At that the British lion has always got his tail dragging.

However, according to the laws of compensation, those who live by the pipe shall perish by the pipe.

"Mint Begins Coining Memorial
Half Dollars."
Probably in memory of the half

dollars that used to be worth 50 cents.

"Helium Gas Bill Approved by House."

singularly significant in the word:
"Helium" as applied to a gas bill.

One hundred and eighty-three girl students at Vassar express the opinion that a place should be set aside by the college for smoking purposes. Will some philanthropist kindly kick in with a fund to endow a "smokehouse" for the ladies?

The Cardinals are a second division team in the opinion of John McGraw. In our opinion John McGraw is a second division manager, so there!

“Lower Paving Costs Laid to Automobile.”

Maybe so but we feel that some of the credit should go to rubber heels.

An educator of Pittsburg says that the schools of that city were patterned largely after St. Louis. In return we can say that the volume and quality of our smoke is patterned after Pittsburg.

"Yankees to Appear With Old
ineup."

See where John McGraw is looking for trouble from the Pirates this year. Stand by to repel board-

However, John has scuttled the irates so often that it has become habit with him.

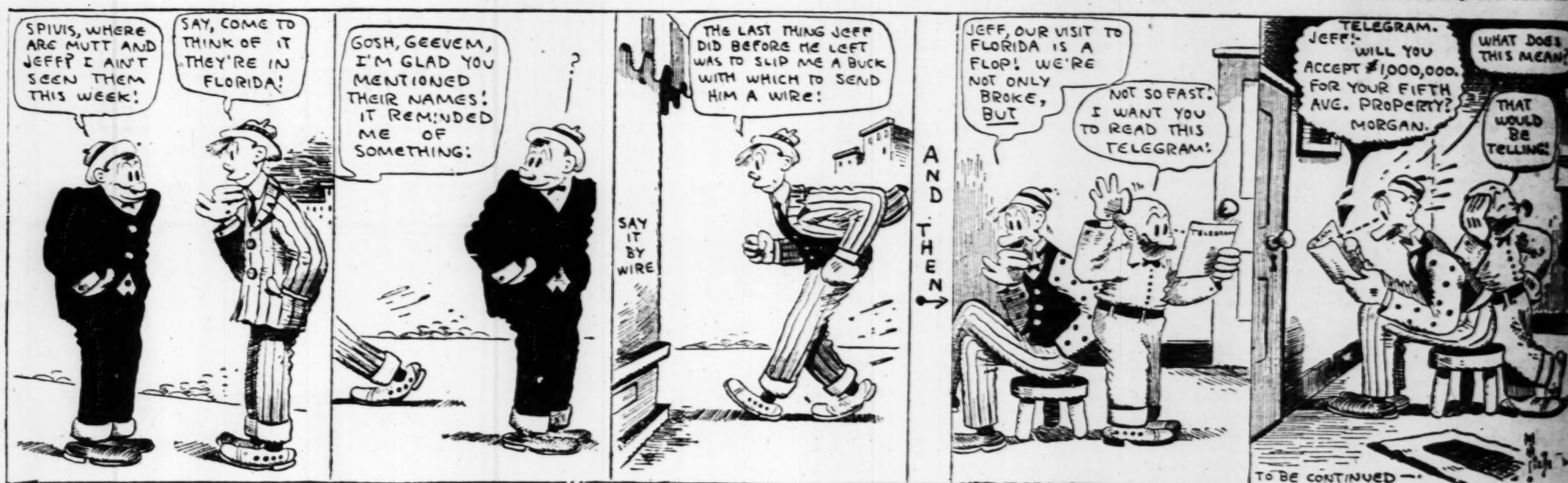
CAN YOU BEAT IT?—By MAURICE KETTEN



FAMILY STUFF—DAD PULLS A “BONER”—By FONTAINE FOX



MUTT AND JEFF—A CROSS-WORD PUZZLE HAS NOTHING ON THIS TELEGRAM—By BUD FISHER



KRAZY KAT—By HERRIMAN



LIFE'S LITTLE JOKES—NUMBER 693,004—By RUBE GOLDBERG



BRINGING UP FATHER—By GEORGE McMANUS



GETTING THE FACTS CORRECT—BY IRVIN S. COBB

THIS one originated in England. On the outskirts of a small village in Sussex an automobile was halted by a local Constable for driving with defective lights on his car.

"I'll have to 'ave your name, sir," said the officer preparing to write out the summons.

"John Smith," said the traveler, truthfully.

"None of that now," said the vigilant officer., "I want your right name and address and no foolishness."

"Oh, very well," said the motorist, "if you must have it, it's William Shakespeare, Stratford-on-Avon."

"Thank you, sir," said the satisfied Constable; "now you may proceed."

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WEEKLY RADIO SECTION

BROADCASTING PROGRAMS OF PRINCIPAL CITIES

Section of the ST. LOUIS POST-DISPATCH

SATURDAY, JANUARY 24, 1925.

A RADIO FORECAST FOR 1925

Delivered Through Station WJZ, New York.

By ORRIN E. DUNLAP JR.,
Radio Editor of the New York Times.

ANY radio listeners may wonder how radio improvements expected during the coming year will affect their receivers. One of the first questions that occur to a man who buys a radio seems to be, "How long before my set will be obsolete?" A brief review of the developments of the past year gives a good basis for a 1925 radio forecast.

The outstanding radio events of 1924 have been pictures transmitted across the Atlantic; the development of short wave transmission and Marconi's beam or directional transmitter. Two methods of radio photography have been demonstrated, the Jenkins and Ranger systems. Improvements can be expected during the coming year, not only in the transmission of photographs but in the evolution of radio moving pictures. However, it is not expected that the World's Series of 1925 will be seen in homes throughout America by radio.

This is an event for future years. The development of short-wave transmission has opened up a new field for research. This field gives more channels in the ether and, therefore, relieves congestion and interference. It has been discovered that much less power is required when short waves are used. Marconi's beam transmitter employs short waves from 22 to 100 meters. It reflects the waves in a definite direction just like the reflector of a lamp or lighthouse concentrates light and flashes a beam instead of spreading it in all directions. Marconi predicts that the powerful long-wave wireless stations now using alternators and arcs will soon be succeeded by short-wave beam transmitters which conserve energy.

During November signals transmitted on a 51-meter wave length from a low-power station in Australia were successfully received in England. During the past ten days trials have been successful from Poldhu with Canada, the United States, Brazil, Argentina, Australia, and, for the first time, with Bombay, India, and Cape Town, South Africa. The power used was 15 kilowatts. The results fully confirmed expectations.

It is claimed that the information gained will render possible the installation of comparatively low-power stations capable of establishing and maintaining commercial services by day and night between England and the most distant parts of the globe.

The low cost of the system, both in capital and running expenses, compared with that of the existing type of stations, should facilitate a reduction in telegraph rates for all long-distance communications, besides making direct communication with some of the smaller outposts of the world commercially remunerative.

Marconi anticipates the early arrival of the day when the practical range of broadcasting will be increased enormously; and American stations, for instance, will be heard in England with clearness and regularity during the day, instead of only late at night, as at present. It is also quite reasonable to expect that it will soon be possible for an important speech to be broadcast even to the most distant parts of the world, whether it is made during the hours of daylight or darkness.

The radio industry has grown rapidly in 1924. Sales this winter are calculated to be 500 per cent greater than last season. It is estimated that today there are close to 5,000,000 receiving sets in the United States; 1,000,000 in England and 100,000 in Canada. The Department of Agriculture estimates there are 375,000 receivers on farms, which is an increase of 155 per cent in a year.

The industry is more stabilized than it was a year ago. The great crowds that attended the radio shows in New York, Chicago, Boston and Buffalo last fall indicated clearly that radio has gained thousands of new followers since January, 1924.

As broadcasting has widened its scope and gained more followers, so has the radio industry developed. The business has grown in four years to a sales volume of \$115,000,000 in 1924, and the Copper and Brass Research Association, after a survey of the radio field, estimates that the business of the radio industry for 1924 will reach the \$300,000,000 mark, and within two or three years sales will reach the \$500,000,000 mark.

A vacuum tube manufacturer estimates that sales of tubes alone for the present year will total in excess of \$50,000,000, while one of the leading parts manufacturers estimates that as much as \$250,000,000 will be spent for radio parts and sets. Sales of dry cells and batteries are placed at \$45,000,000.

According to figures compiled by the American Radio Association, a survey made by that organization reveals that there are more than 3000 manufacturers of radio supplies in the United States, ranging from the manufacturers of complete sets and tubes to coils and other parts.

There are about 1000 distributors and 27,000 retailers. More than 250,000 persons are connected directly or indirectly with the manufacture and distribution of radio supplies. Judging from the volume of business done so far this year, it is calculated that the business will aggregate \$300,000,000 for the year 1924.

There are now 550 broadcasting stations in the United States and close to a total of 1000 broadcasting stations in the world; 18,000 amateur transmitters in the United States and about 15,000 ship and shore commercial stations.

Since November, 1920, there have been 1180 radiophone stations, 630 of which have stopped broadcasting. In 1922, 250 stations opened and before the year closed 299 out of the total in operation discontinued broadcasting. Up to Dec. 1, 1924, 250 new stations had opened and 239 had signed off for the last time.

Four years ago the radio industry was not considered of sufficient importance to give it an individual classification in the field of business. It was grouped under electrical products, along with electrical toys. When broadcasting started many hailed it as a fad. Today it is considered one of the first 40 industries of the United States, and the sales of radio equipment are not likely to reach a saturation point for at least 10 years to come.

Business in radio circles during the past summer has shown an increase of 50 per cent.

The number of stations is on the increase, so much so that Secretary Hoover has abandoned the plan suggested by the third national radio conference to allocate new wave lengths. He is in hopes that some of the stations will stop broadcasting during the coming year, and if such is the case the interference problem may be automatically solved.

There are now 88 class B stations. The end of 1924 finds many of the stations increasing power to 1500 watts and some as high as 5000 watts.

Several leaders in the industry have suggested super-power broadcasting stations radiating 50 kilowatts and higher. Definite plans regarding the construction of such a station are likely to be announced before the close of 1925.

International broadcasting is not much further advanced than it was at the beginning of the year. Only fragments of waves from nine American stations out of 550 were heard in England during the international tests in November and several of them used eight and ten kilowatts. Reception of European stations on this side of the Atlantic was nothing spectacular. Until super-power stations are built international broadcasting is not likely to amount to much.

There is less trouble from interference now than a year ago. Many of the old spark sets are being replaced by vacuum tube transmitters, which do not interfere with broadcast listeners. It is understood that new installations will continue to be made throughout

1925, so that the code interference from spark sets will not be a great annoyance.

There are more toll stations "on the air" now than a year ago. These stations receive pay for broadcasting indirect advertising material. There is much more advertising matter vibrating the ether today than last year.

It was the opinion of many last year that a fund would be necessary to pay radio entertainers. Several funds have been started for individual stations, but they have all been abandoned because of insurmountable difficulties. The contributions were returned to the subscribers. It is apparent that a fund for an individual station cannot be successful. It is still believed by many that such a fund is necessary to get the best of talent for broadcasting. It may be that a plan will be developed which will take care of all stations in the metropolitan district. Chicago might have another fund and Philadelphia another, but there would be little to be gained for Chicago listeners contributing to a New York fund.

The elimination of static and transmission of power by radio are problems to be solved by time. Progress along these lines may be made in 1925. Radio on trains is a phase of reception that much can be expected from during the new year. Tests made on the Twentieth Century in receiving election returns lead to the prediction that Pullman seats will soon be equipped with headsets so that passengers can hear radio entertainment.

The practicability of receiving messages by radio on a transcontinental, non-stop train is now being tested on the Golden State Limited.

The greatest service radio broadcasting rendered during 1924 was the election returns. It was estimated that the election return audience was the largest that ever tapped the ether. The inauguration of President Coolidge, March 4, will undoubtedly be the outstanding radio broadcast of 1925.

Interconnection of a chain of stations by land wires has been urged by Secretary Hoover to give national distribution to important events. Twenty-seven stations scattered throughout the country broadcast President Coolidge's speech on election eve and demonstrated that such a system was feasible. Undoubtedly more broadcasting on a national scale will be done in 1925, and especially the presidential inauguration ceremonies.

Much can be expected in short wave transcontinental relaying during 1925. The new Denver station KCA is in a good position to relay programs sent from New York, Schenectady, Pittsburg and Hastings, Neb., over the Rockies to KGO, Oakland, Cal., for rebroadcasting.

It is also possible for WRC, Washington, and WBZ, Springfield, to pick up the New York broadcast and send it over the South and New England.

The past year brought no revolutionary radio receiving circuits. This shows that radio is becoming stabilized. There have, however, been many improvements in design and workmanship in the sets of 1924. It is not likely that any one who bought a set in 1924 will find it obsolete at the end of 1925. New improvements can be expected during the coming year. The super-heterodyne made its first appearance as a commercial product in the spring of 1924. The original super-heterodyne model will be improved, refined and made more compact before many months pass in 1925. It will be portable.

The trend now seems to be for complete sets rather than parts. This fact may lead the radio business from the many small radio shops to the music stores. People are not assembling as many sets at home as they did one or two years ago. This is attributed to the fact that complete receivers are less expensive than they were at first and, furthermore, they can now be purchased on time payments. There will be more combination radio-phonograph sets in operation at this time next year than there are today.

One of the greatest improvements that will come in 1925 will be alternating current filament and plate supply devices, which permit the use of the house lighting current in place of batteries. Radio sets will then be connected to the lamp socket just as an electric iron or toaster. Some of the new sets may have the current supply apparatus incorporated within the cabinet. An attachment which will stop interference from radiating receivers is expected to appear within the next six months.

It is expected that a radio "talk-bridge" will be working across the Atlantic before 1925 closes. It is understood that the installation is complete on this side of the sea and the station at Rugby, England, will be working early in 1925. This will enable a person in New York to pick up the telephone receiver and ask for a number in London, or on board a ship at sea, just as a long-distance phone call is made. The rate for a three-minute chat will undoubtedly be much higher than a three-minute telephone conversation between New York and Chicago.

A survey of radio today shows that the industry is just getting under way and the volume of business next year and for years to come will be ever increasing. Radio renders public service, entertainment and education. Its possibilities are unlimited. International broadcasting, super-power, and radio moving pictures are developments that can be foreseen. They will open new fields and create tremendous interest in listening and seeing through the air.

COMMITTEE REPORTS ON CHURCH VALUE OF RADIO

By THOMAS STEVENSON.

WHAT is the spiritual value of radio and how extensively should it be used in spreading religious teachings? This is a question to which the Federal Council of Churches is attempting to find the answer.

On the one hand are many who claim that in a spiritual sense radio is a blessing to shut-ins and old folks who are unable to leave home as well as to farmers who live in isolated communities and have but few opportunities for attending regular church services.

On the other hand are many others who doubt the spiritual value of radio. They assert that many people who ordinarily would attend church remain at home and follow the services by radio, under which circumstances the perversity of their minds, the family is confirmed in habits of personal indulgence and the Church and pastor lose

the inspiration which comes from their presence in the sanctuary.

Almost at every national meeting held by the Federal Council of Churches the value of radio has been thoroughly discussed. Requests have been sent by this organization to many churches to broadcast their services as often as possible.

At present there are around 50 churches which make a regular feature of broadcasting their services regularly. Whether or not this number will increase depends almost entirely on future experiences.

For the past year the Commission on Evangelism of the Federal Council of Churches has been studying the value of radio for religious purposes. This Commission recently made this report on its investigation:

"The radio is a mighty agency for good (Continued on Page 3.)"

Deresnadyne Circuit With New Improvements

By HARRY J. MARK.

TOWARDS the end of the last radio season, considerable interest was aroused by the introduction of a method of controlling oscillation in tuned radio-frequency amplifiers known as "deresonating the plate circuit." Its unusual efficiency and selectivity, even in the larger cities where interference is overpowerful, created considerable demand for more details, although the season was the time when vacation meant more than building radio sets. This season, E. F. Andrews starts us with a still further improvement both in the circuit and in the design of the inductances. That the improvements are worth while is amply demonstrated by the performance of the set. During the International Week Tests, this set did more than merely "get" Europe. The full programs, including the call letters of the stations, were clearly and distinctly heard over the loud speaker. And this in a city where regenerative-set interference was vehemently criticized.

It will probably be best to just rapidly touch on radio-frequency amplification with its advantages and disadvantages before taking up the "Deresnadyne" principle and its improvements. Tuned radio-frequency amplification is by no means new, but it is only in the last two years that practical methods were developed to overcome certain characteristic difficulties.

The principal difficulty has been the tendency of the tubes to go into self-oscillation. The methods used in controlling this characteristic furnishes the various classifications of tuned radio-frequency amplifiers. To properly explain this oscillation without resorting to considerable technical analysis becomes a difficult matter. It is commonly understood that in a vacuum tube the grid is a control device requiring but a very small amount of energy to operate the flow of a decidedly greater amount of energy which flows in the plate circuit. Between this grid and plate there exists a capacity value just as between the plates of a condenser, only the value is very small. However small, and because it is impossible to eliminate it in the construction of the tube, it provides a source of path for the leakage of some of the excessive current or energy from the plate to the grid. It might be well to state that not only does this occur inside the tube, but in a poorly designed set, through electro-magnetic coupling or capacity between wires or even apparatus further leakage paths are introduced. When the energy in the plate circuit becomes sufficiently high, part of this energy is transferred back to the grid circuit controlling the oscillation of the grid instead of allowing the grid to be controlled by the incoming signals. In this condition, the tube becomes a little transmitter. This action, called self-oscillation, is what happens when the set starts whistling a little tune of its own.

It is, of course, the aim of those who build tuned radio-frequency receivers to get as high a degree of amplification as possible. The receiver must, however, be kept from oscillating or the signals will be so distorted that no one would care to listen to them. All radio fans know that tuning a radio circuit reduces its resistance and therefore gives a louder signal. This is true of both the grid and plate circuit of a tuned radio-frequency amplifier, but unfortunately, if the plate circuit is tuned, oscillation will occur unless losses are introduced in some manner.

One means of preventing self-oscillation is to put a resistance in the grid circuit to use up the excess energy. This can be done by a potentiometer to change the grid bias or by an absorption circuit tuned or untuned coupled to the grid coil. Unfortunately, introducing resistance by any of these methods reduces volume and destroyed selectivity besides making the set difficult to control. A more popular form by which the excess energy in the plate circuit can be pre-

vented from causing oscillation is the neutrodyne method, in which part of the plate circuit energy is reversed and brought back to the grid circuit to oppose and neutralize the energy passing through the grid-plate capacity of the tube. Although this method is quite effective, it has so far been necessary to sacrifice amplification at the higher wave lengths because the neutralizing effect changes somewhat with the tuning. The tone quality of the neutrodyne is also not good and the great difficulty of securing proper neutralization makes it rather impractical for the home builder. The fundamental reason for self-oscillation is just as much the amount of voltage across the plate circuit as it is the capacity between the plate and grid of the tube. The neutrodyne prevents it by counteracting the effect of the tube capacity. The Deresnadyne principle prevents it by allowing only the amount of energy to be generated in the plate circuit which can be used for undistorted amplification. Instead of building up more energy than can be used in the

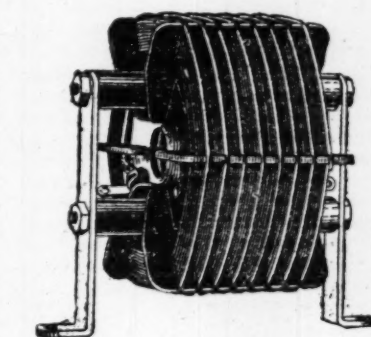


FIG. 2—Paddle Wheel Inductance.

plate circuit and using the excess to stop oscillation, the Deresnadyne principle prevents this excess energy from ever being generated. Amplification is fully as great and oscillation is thus stopped at its source, in the simplest and most effective way. This result is accomplished by detuning, or deresonating, the plate circuit. The number of turns in the radio-frequency transformers are reduced to such a point that maximum signal strength is obtained without oscillation. In this condition, the plate circuit is not resonant to the signal being received and to which the grid circuit is tuned.

Due to the increased tendency to oscillate at lower wave lengths, it is necessary to provide some means to prevent the voltage across the plate circuit from increasing as the set is tuned to receive the lower wave length station. There are several ways by which this can be accomplished. One of these is the use of the plate-balance control to lower the plate voltage of the radio-frequency tubes, as lower wave length stations are tuned in. This method will be described later on. Although these methods are the subject of several patent applications, their free use by the home builder is encouraged.

The efficiency of the circuit as a whole depends to a very great extent upon the efficiency of the coupling coils used in the stages of tuned radio-frequency amplification. Low-loss condenser arguments are often absurd when the efficiency of inductance units is considered. Andrews' Paddle Wheel Inductance is a radically new type of real low-loss inductance unit. In measuring coil efficiency, the highest possible ratio of inductance to resistance is essential. In a coil of this type the insulating material

supporting the coil winding is so placed that absorption losses are almost eliminated. The high-inductance value is proven by the fact that .00025 mfd. variable condensers are used for tuning over the entire wave-length range. Figure 2 shows the Andrews Paddle Wheel Inductance as used in the Deresnadyne circuit shown in Figure 1. While the fan is encouraged to build his own set if he so desires, patent applications prevent the manufacture of it.

Parts Required and Panel Layout.

In building the set, the first point of importance, after the circuit is understood, is the selection of the parts required. It is useless to take particular pains in getting the best of some parts and then neglecting the rest by buying the first thing that is offered. Low-loss variable condensers have been discussed to such an extent that the average fan has almost become fanatical on the subject. How many are taking the same pains in purchasing their audio-frequency transformers? Don't buy the maximum ratio type, unless you are willing to accept distortion as a price for volume. Low ratios will always give you good quality amplification.

A little shielding between the variable condensers and the panel will do lots of good, so don't leave it out because it adds a little more work. Have you ever stopped to consider how many manufacturers set up shielding? The manufacturer wouldn't put it in if it wasn't worth while.

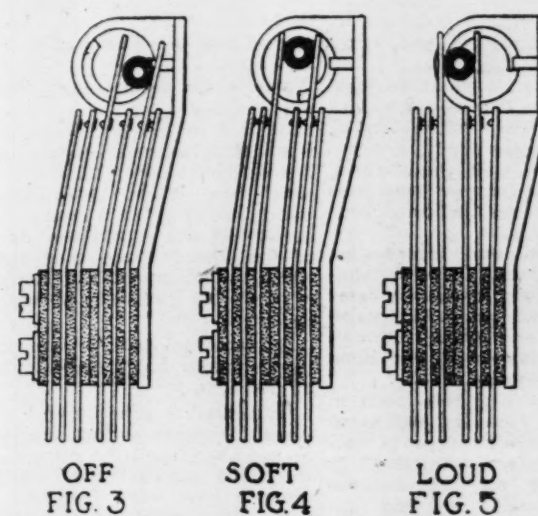
In buying fixed condensers, get good ones. Cheap condensers rarely are accurate in capacity value. If you were buying a tire for an automobile, would you buy one from a firm who guessed at the size and then let you try it out to see if it would fit the wheel? By-pass condensers must pass a specific current, changing the capacity may limit the functions they are intended for. In buying tube sockets, get the kind where the springs

ing. The special switch not only acts as a battery switch, but also connects the loud speaker for one or two stages of audio-frequency amplification as desired. If desired, the regular jack system and a battery switch can be substituted. A provision is made for plugging headphones, as they are unnecessary; all tuning in can be done with the loud speaker.

List of Parts.

- 1 panel, 3-16x7-1/2.
- 1 battery post strip, 3-16x 1-1/2.
- 1 ant. and grd. post strip, 3-16x1-1/2.
- 1 selector jack strip, 3-16x1-1/2.
- 1 baseboard, 3-16x1-1/2.
- 3 pos. metal shielding, 1-3/4x3-1/4x5/8.
- 12 metal spacer tubes, 1/4 L. D. x 1/4 O. D. x 1-1/4.
- 6 midjet jacks.
- 2 midjet plugs.
- 9 binding posts.
- 1 set 2 Andrews' Paddle Wheel Inductances.
- 3 variable condensers, .00025 mfd.
- 5 standard tube sockets.
- 1 grid condenser with clips, .00025 mfd.
- 2 fixed condensers, 1 mfd.
- 1 fixed condenser, .001 mfd.
- 1 rheostat, 6-ohm.
- 1 variable resistance, 0 to 200,000 ohms.
- 1 fixed grid leak, 1 megohm.
- 1 stage control switch.
- 2 audio-frequency transformers, low ratio.
- 3 dials, 4-inch.
- 1 cabinet, to fit.

The stage-control switch presents some interesting features. The illustration



How Volume Control Switch Works.

make good positive contact with the prongs on the base of the tubes. Poor contact between spring and prong, especially in the two radio-frequency stages, will make more trouble than can be imagined.

The special resistance, variable from zero to 200,000 ohms, must be of the noninductive type. A wire-wound type, if possible to this high value, would not only be impractical, but would have an inductance value that would effect tun-

ing, figures 3, 4 and 5, show the OFF, SOFT and LOUD positions. In the OFF position, the A battery connection is open. In turning the knob to the SOFT position, the A battery connection is closed and the loud speaker is connected to the plate of the tube V-4. When the knob is turned to the LOUD position, the plate terminal of audio transformer AT-3 and the loud speaker is already in the plate circuit of tube V-5. In the SOFT position, one stage of audio amplification is used, while the LOUD covers both stages. The Andrews Radio Co. is now placing on the market a kit of parts for this Deresnadyne set.

The use of a 7x26-inch panel permits satisfactory spacing of the three variable condensers and the paddle wheel coils so as to avoid coupling in the radio-frequency stages. Trying to save a few inches of panel stock and crowding apparatus close together will soon convince the constructor of his foolishness when he starts operating the set. Compactness may be desirable but not at a sacrifice of quality and efficiency.

All told there are only six units that mount on the panel. The three variable condensers are kept to the left as shown

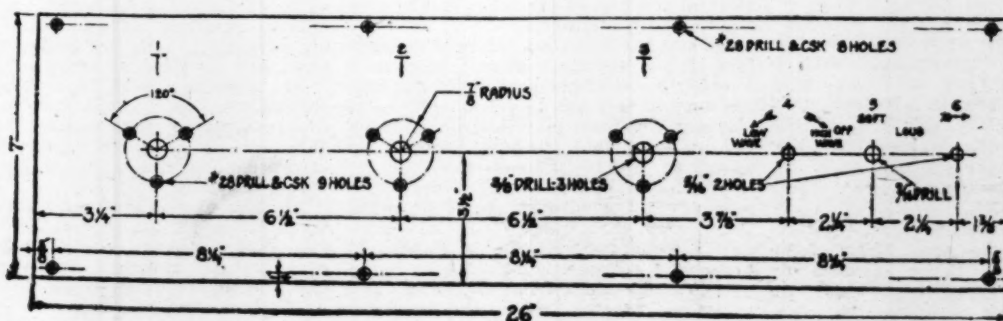


FIG. 6—Panel Mounting Diagram.

Including

In figure 6. The next knob is the ble resistance, then comes the stage control switch and last the rheostat controls the lighting of all five

Little has been said about the resistance called the plate-balance control. In order to secure maximum efficiency at high wave lengths, the wheel inductances have their turns so proportioned as to give maximum amplification without oscillation. A variable resistance is connected between the plate coils, and the very terminal to prevent oscillation at lower wave lengths. Across this connection to the negative filament terminal is a by-pass condenser. This condenser closes the plate circuit to the filament. The voltage of the B battery determines the energy in the plate circuit. This by-pass condenser, any radio-frequency currents flowing through the resistance—hence resistance does not broaden the

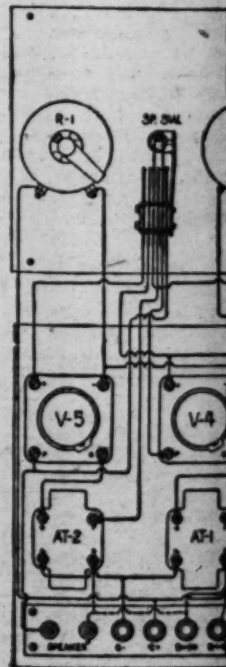
This variable resistance provides means of reducing this voltage across the plate-circuit energy. At high lengths, with the knob turned to the right, the deresonance of the plate circuit approaches the lower lengths, and gets closer to the resonance point of the plate circuit by turning the knob to the left, and is inserted between the plate battery, thus lowering not only voltage, but also the plate energy, thus preventing self-oscillation. By just below this oscillating point maximum radio-frequency relay action is obtained with wonderful of tone. It likewise acts as a control.

It seems to be a simple matter to average fan to assemble the apparatus on the front panel, but for some or other the rear of a lot of sets like a cross-word puzzle. Perhaps inside is not visible for guests' eyes but don't overlook the fact that cases out of ten it's the rear of the set that is the cause of unsatisfactory action. Figure 7 gives a clear illustration of the best arrangement of apparatus on the baseboard and at the same time indicates the logical arrangement of the components to conform to the hook-up diagram. There is ample room on the baseboard, so no fears need be entertained regarding the accessibility of various units for soldering the

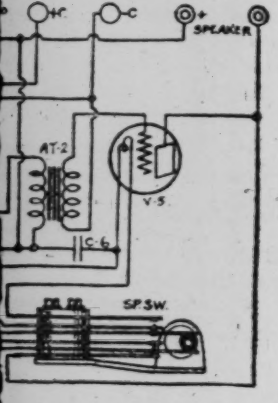
This strip carries the three jacks J-1, 2 and 3. When the plug P-1, connected by a flexible lead to the antenna post, is plugged in maximum selectivity is obtained. Need only be done when interference is bad, such as may be encountered in large cities. J-2 gives a little less selectivity for interference conditions, increases the volume, whereas, where interference is negligible, then J-3 is most volume.

This strip not only carries the binding posts, but also two more jacks, not marked, for loud-speaker connections. This facilitates the connection and eliminates the necessity of the panel, with plugs and wiring all over the front of the set. The binding posts specified in the list of parts are used for these battery connections, while the other two are for the antenna and ground post strip.

All three strips are mounted on three-quarter inch above the base by means of the 12 spacer tubes as in the list of parts. The additional jack is mounted



Improvements,



The special switch not only acts as a battery switch, but also connects the speaker for one or two stages of audio-frequency amplification as desired. The regular jack system and battery switch can be substituted. No provision is made for plugging headphones, as they are unnecessary; all tuning can be done with the loud speaker.

- List of Parts.**
- 1 panel, 3-16x7x25.
 - 1 battery post strip, 3-16x 1 1/4x8.
 - 1 ant. and gnd. post strip, 3-16x1 1/4x5 1/2.
 - 1 selector jack strip, 3-16x1 1/4x2 1/2.
 - 1 baseboard, 1/2x9x25 1/2.
 - 3 pos. metal shielding, 1-3/2x3 1/4x5 1/2.
 - 12 metal spacer tubes, 1/4 I. D. x 3/4 O. D. x 1 1/2.
 - 6 midjet jacks.
 - 2 midjet plugs.
 - 9 binding posts.
 - 1 set 2 Andrews Paddle Wheel Inductances.
 - 3 variable condensers, .00025 mfd.
 - 5 standard tube sockets.
 - 1 grid condenser with clips, .00025 mfd.
 - 2 fixed condensers, .5 mfd.
 - 1 fixed condenser, .001 mfd.
 - 1 rheostat, 6-ohm.
 - 1 variable resistance, 0 to 200,000 ohms.
 - 1 fixed grid leak, 5 megohms.
 - 1 stage control switch.
 - 2 audio-frequency transformers, low ratio.
 - 3 dials, 4-inch.
 - 1 cabinet, to fit.

The stage-control switch presents interesting features. The illustration shows the switch in the OFF position. In turning the knob to the SOFT position, the A battery connection is made and the loud speaker is connected to the plate of the tube V-4. When the knob is turned to the LOUD position, the A battery connection is made and the loud speaker is connected to the grid terminal of the audio transformer AT-2 in the circuit of tube V-5. In the SOFT position, one stage of audio amplification is obtained, while the LOUD position gives two stages of audio amplification. The Andrews Radio Co. is now marketing on the market a kit of parts for the Deromayne set.

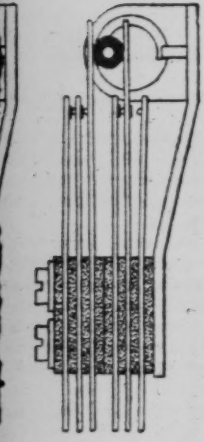


FIG. 5

With Works.

Figures 3, 4 and 5, show the OFF, SOFT and LOUD positions. In the OFF position, the A battery connection is made and the loud speaker is connected to the plate of the tube V-4. When the knob is turned to the LOUD position, the A battery connection is made and the loud speaker is connected to the grid terminal of the audio transformer AT-2 in the circuit of tube V-5. In the SOFT position, one stage of audio amplification is obtained, while the LOUD position gives two stages of audio amplification. The Andrews Radio Co. is now marketing on the market a kit of parts for the Deromayne set.

The use of a 7x25-inch panel permits satisfactory spacing of the three variable condensers and the paddle wheel inductances. Trying to save a few inches of panel stock and crowding up the close together will soon convince the constructor of his foolishness when parts operating the set. Compactness may be desirable but not at a sacrifice of quality and efficiency.

As there are only six units that fit on the panel, the three variable resistors are kept to the left as shown

Including the Latest Paddle Wheel Inductances

In figure 6. The next knob is the variable resistance, then comes the stage-control switch and last the rheostat, which controls the lighting of all five tubes.

Little has been said about the variable resistance called the plate-balance control. In order to secure maximum efficiency at high wave lengths, the paddle-wheel inductances have their primary turns so proportioned as to give maximum amplification without oscillation. A variable resistance is connected in series between the plate coils, and the B battery terminal to prevent oscillation at the lower wave lengths. Across this connection to the negative filament terminal is a by-pass condenser. This condenser closes the plate circuit to the filament of the tube. The voltage of the B battery determines the energy in the plate circuit. This by-pass condenser prevents any radio-frequency currents from flowing through the resistance—hence the resistance does not broaden the tuning.

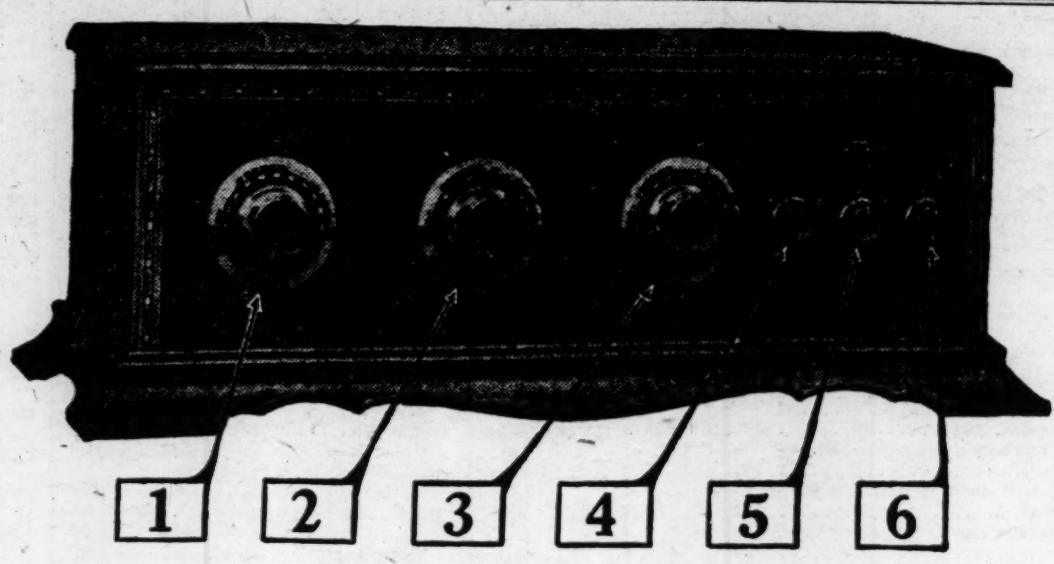


FIG. 8—The Completed Set.

This variable resistance provides a means of reducing this voltage and thus the plate-circuit energy. At high wave lengths, with the knob turned to the right, the deresonance of the plate coil stabilizes the circuit. When turned to the left the resistance is zero. As the tuning approaches the lower wave lengths, and gets closer to the natural resonance point of the plate circuit, the set approaches the oscillation point. Now, by turning the knob to the left, resistance is inserted between the plate and the battery, thus lowering not only the voltage, but also the plate energy, and thus preventing self-oscillation. By keeping just below this oscillating point, the maximum radio-frequency relay amplification is obtained with wonderful clarity of tone. It likewise acts as a volume control.

It seems to be a simple matter for the average fan to assemble the apparatus on the front panel, but for some reason or other the rear of a lot of sets looks like a cross-word puzzle. Perhaps the inside is not visible for guests' criticism, but don't overlook the fact that in nine cases out of ten it's the rear of the panel that is the cause of unsatisfactory operation. Figure 7 gives a clear illustration of the best arrangement of apparatus on the baseboard and at the same time indicates the logical arrangement of wiring to conform to the hook-up diagram, figure 1. There is ample room on the baseboard, so no fears need be entertained regarding the accessibility of the various units for soldering the leads.

This strip carries the three midjet jacks J-1, 2 and 3. When the midjet plug P-1, connected by a flexible lead to the antenna post, is plugged into J-1, maximum selectivity is obtained. This need only be done when interference is bad, such as may be encountered in very large cities. J-2 gives a little less selectivity for interference conditions, but increases the volume, whereas, when interference is negligible, then J-3 will give most volume.

This strip not only carries the battery binding posts, but also two more midjet jacks, not marked, for loud-speaker connections. This facilitates the connections and eliminates the necessity of jacks on the panel, with plugs and wiring running all over the front of the set. Seven of the binding posts specified in the list of parts are used for these battery connections, while the other two are used on the antenna and ground post strip.

All three strips are mounted one and three-quarter inches above the baseboard by means of the 12 spacer tubes specified in the list of parts.

The additional jack is mounted on the grid terminal of the tube socket V-1, making electrical connection with it. When using an outdoor aerial, the midjet plug P-2, which is connected by a flexible lead to the grid terminal of the paddlewheel inductance L-1, is plugged into this midjet grid jack J-4.

When a loop is used, connections are made directly to the antenna and ground binding posts, but plug P-2 is taken from jack J-4 and left disconnected, while the plug P-1 is inserted in jack J-4 instead. This takes the coil L-1 from the grid circuit and directly connects the one side of the loop to the grid. The other end of the loop, on the ground post, connects to the negative filament but inside of the rheostat R-1.

When the set is completed the following accessories will be required for operation of the set:

- Loud speaker.
- Five vacuum tubes.
- Six-volt storage battery.
- Ninety-volt "B" battery.
- Antenna and ground system.
- Necessary wire for connections.

The tubes should be all of the A type, but be sure you are using good ones. Poor tubes will ruin the best set. A detector tube of the UV-200 or C-300 type is not recommended.

The storage battery should be of a good reliable type, with about 80 ampere-hour capacity, in order to avoid frequent recharging. It would be advisable to buy a good charger for this purpose. The use of dry cells is possible, but will not be found economical.

The "B" battery can consist of four 22 1/2-volt units or two 45-volt units. The heavy-duty type are recommended for greater economy in the long run. Storage "B" batteries will also be found very satisfactory, but good ones must be purchased.

When it comes to the subject of loud speakers, naturally a good one is advised. The writer's experience in this line is that you get just what you pay for! The cheaper the price, the poorer the quality. It will surprise many to know how much the loud speaker has to do with satisfactory reception. The tips on the cord are plugged into the two midjet jacks. If one of the ends of the cord has a colored thread in the braiding, it should be connected to the jacked market plus -|- in the picture diagram figure 7.

Before trying to operate the set, it will be well to carefully read over the following points on tuning the set:

1. Turn the stage-control switch knob

Report on Church Value of Radio

(Continued From Page 1.)

or evil. More than three million sets are in use and there are five hundred and sixty commercial broadcasting stations in the United States. It is estimated that twenty million listeners constitute the radio audience. A year ago we sent an earnest request to the secretaries of City Federations and other Church leaders throughout the country asking that they use the radio to broadcast every Sunday, and as often as possible through the week, sermons of real evangelical value, in which the spiritual note should be supreme. In many cities this has been accomplished in a remarkable degree. The results in New York from the work of the Federation of Churches have been received from people who have accepted the invitation of the preacher and given themselves to Jesus Christ for life and service.

"Some, however, are questioning the spiritual value of the radio. They are affirming that many remain at home from the morning service, and without spiritual or physical preparation hear the message over the radio. All the accessories of worship, are absent, and

the critics say that under such circumstances the prayers themselves lose most of their value, the family is confirmed in habits of personal indolence, and the Church and pastor lose the inspiration which comes from their presence in the sanctuary. This is a matter to be settled by actual experience and we shall be glad to know what the results of this new form of the proclamation of the truth really are."

Arthur E. Hungerford, publicity adviser of the Federal Council of Churches has discussed the radio question with many church leaders in different sections of the country. Here is what Mr. Hungerford thinks about it:

"Most church leaders believe in the possibilities of the radio for extending the teachings of Christ. Many are working on the problem.

"There is hardly a Sunday school in the country that does not serve the churches in some way. In many cities the local church federations arrange regular services and programs and in others individual congregations do the work. Through these methods many persons receive the church message who would not otherwise get it.

"The radio has been a blessing to the shut-ins and old folks who are unable to leave home. It has opened the way for farmers and their families who live in isolated communities and have but few opportunities for attending regular church services to get some of the benefits of the church. Of course, it is far better for a man or woman to go to church when possible, than to hear the sermon over the radio. But not many remain home because they can hear a sermon in the home.

"Probably the outstanding church program on the radio is the Sunday afternoon address of the Rev. Dr. S. Parkes Cadman, President of the Federal Council of Churches, at the Bedford branch Young Men's Christian Association, Brooklyn, N. Y. That this service is effective is shown by the fact that Dr. Cadman receives hundreds of letters from his hearers. Most of them ask for spiritual advice and consolation. Dr. Cadman keeps a stenographer busy answering them.

"The possibilities of radio services to the churches failed to realize the possibilities and opportunities of the motion picture until they had become entirely commercialized and it was too late for the churches to take advantage of them. The same mistake will not be made regarding the radio. Dr. Cadman and his work prove this. The church will make great advances during the next few years and radio will play a big part."

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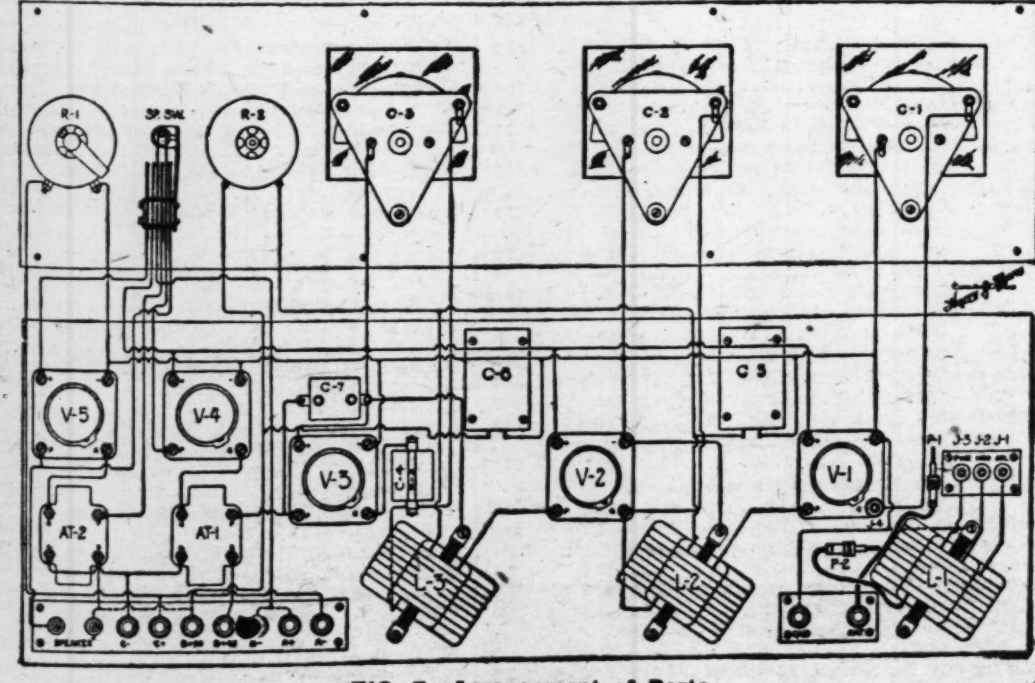


FIG. 7—Arrangement of Parts.

Complete List of Broadcasting Stations in

the Uni

THE wavelengths here given are up to date as of Jan. 22. The Department of Commerce recently has been assigning new experimental waves to some stations. This list therefore may be subject to changes, which will be published in the Post-Dispatch as they are made.

*Indicates experimental wavelength.

Station	Owner and Location	Wave Length Meters	Power Watts
KDKA	Westinghouse E. & M. Co., East Pittsburgh, Pa.	309	1000
KDPM	Westinghouse E. & M. Co., Cleveland, O.	270	500
KDPT	Southern Electric Co., San Diego, Cal.	244	50
KDYI	Newhouse Hotel, Salt Lake City, Utah	250	150
KDYM	Savoy Theater, San Diego, Cal.	280	100
KDYQ	Oregon Institute of Tech., Portland, Ore.	360	10
KDZB	F. E. Siefert, Bakersfield, Cal.	240	100
KDZE	Rhodes Co., Seattle, Wash.	270	100
KFAH	McArthur Bros. Merc. Co., Phoenix, Ariz.	360	100
KFAE	State College, Pullman, Wash.	330	500
KFAJ	University of Colorado, Boulder, Colo.	261	100
KFAU	Boise High School, Boise, Idaho	227	100
KFAW	Radio Den, Santa Ana, Cal.	230	10
KFBB	F. A. Buttrey Co., Havre, Mont.	275	50
KFBC	W. K. Azbill, San Diego, Cal.	278	20
KFBG	First Presbyterian Church, Tacoma, Wash.	360	50
KERK	Kimball Upson Co., Sacramento, Cal.	283	100
KFBL	Leese Bros., Everett, Wash.	224	10
KFBU	The Cathedral, Laramie, Wyo.	283	50
KFCB	Nielson Radio Co., Phoenix, Ariz.	238	10
KFCG	First Congregational Church, Helena, Mont.	245	10
KFCV	F. A. Moore, Walla Walla, Wash.	256	100
KFCU	L. E. Rice, Los Angeles, Cal.	236	500
KFCP	R. W. Flygare, Ogden, Utah	360	25
KFCY	F. Mahaffey, Houston, Tex.	360	50
KFCZ	Western Union College, Lemars, Ia.	252	50
KFNZ	Central High School, Omaha, Neb.	258	100
KFDD	St. Michael's Cathedral, Boise, Idaho	252	10
KFDE	University of Arizona, Tucson, Ariz.	268	50
KFDJ	Oregon Agricultural College, Corvallis, Ore.	360	50
KFDL	Knight Campbell Co., Denver, Colo.	226	5
KFDX	First Baptist Church, Shreveport, La.	250	100
KFDZ	H. O. Iverson, Minneapolis, Minn.	273	100
KFEK	Meier & Frank Co., Portland, Ore.	248	50
KFEL	Winnier Radio Corp., Denver, Colo.	254	50
KFEG	J. L. Scroggin, Oak, Neb.	268	100
KFER	Auto Electric Service Co., Fort Dodge, Ia.	231	10
KFEX	Augustine Seminary, Minneapolis, Minn.	261	100
KFEY	Bunker Hill & Sullivan, Kellogg, Idaho	360	10
KFFP	First Baptist Church, Moberly, Mo.	266	50
KFFL	State Journal, Sparks, Nev.	226	10
KFFV	Graceand College, Lamoni, Ia.	250	100
KFFY	Louisiana College, Alexandria, La.	275	50
KFGC	Louisiana State University, Baton Rouge, La.	254	100
KFGD	College for Women, Chickasha, Ok.	248	200
KFGH	Leland Stanford Junior University, Stanford University, Cal.	273	500
KFGI	Crary Co., Boone, Ia.	226	10
KFGJ	First Presbyterian Church, Orange, Tex.	250	500
KFHA	Western State College, Gunnison, Colo.	252	50
KFHI	Pallon & Co., Santa Barbara, Cal.	360	100
KFHL	Penn College, Oskaloosa, Ia.	240	10
KFHR	Star Electric and Radio Co., Seattle, Wash.	263	100
KFIF	Benson Institute, Portland, Ore.	248	100
KFIO	North Central High School, Spokane, Wash.	252	50
KFIQ	First Methodist Church, Yakima, Wash.	278	50
KFIU	Alaska Electric Co., Juneau, Alaska	226	10
KFJX	Church of Latter Day Saints, Independence, Mo.	268	250
KFJZ	Daily Commonwealth, Fond du Lac, Wis.	273	100
KFJB	Marshall Electric Co., Marshalltown, Ia.	248	10
KFJC	National Radio Co., Oklahoma City, Ok.	261	235
KFJD	Liberty Theater, Astoria, Ore.	252	10
KFJE	Delan Radio and Electric Co., Bristow, Ok.	233	100
KFJM	University of North Dakota, Grand Forks, N. D.	280	100
KFJR	Dixon & Son, Stevensville, Mont.	243	50
KFJX	State Teachers' College, Cedar Falls, Ia.	258	50
KFY	Tunwall Radio Co., Fort Dodge, Ia.	246	50
KFJZ	Texas National Guard, 112th Cavalry, Fort Worth, Tex.	254	20

Station	Owner and Location	Wave Length Meters	Power Watts
KFKA	State Teachers' College, Greeley, Colo.	273	50
KFKB	Brinkley Jones Hospital Association, Milford, Kan.	286	500
KFKQ	Conway Radio Laboratory, Conway, Ark.	250	10
KFKU	University of Kansas, Lawrence, Kan.	275	500
KFKV	F. P. Gray, Butte, Mont.	283	50
KFKX	Westinghouse E. & M. Co., Hastings, Neb.	291	1000
KFLA	A. R. Wilson, Butte, Mont.	258	5
KFLB	Signal Electric Mfg. Co., Menominee, Mich.	248	50
KFLC	National Educational Service, Denver, Colo.	268	25
KFLD	Bizzell Radio Co., Little Rock, Ark.	261	20
KFLR	University of New Mexico, Albuquerque, N. M.	254	100
KFLU	San Benito Radio Co., San Benito, Tex.	236	20
KFLV	Swedish Evangelist Church, Rockford, Ill.	229	100
KFLX	George R. Clough, Galveston, Tex.	240	10
KFLZ	Atlantic Auto Co., Atlantic, Ia.	273	100
KFMQ	M. G. Sataren, Houghton, Mich.	263	500
KFMR	Morningside College, Sioux City, Ia.	261	10
KFMT	Dr. G. W. Young, Minneapolis, Minn.	251	50
KFMW	M. G. Sataren, Houghton, Mich.	266	50
KFMX	Carleton College, Northfield, Minn.	283	500
KFNY	Henry Field Seed Co., Shenandoah, Ia.	266	500
KFNG	Wooten Radio Shop, Coldwater, Miss.	254	10
KFNJ	Teachers' College, Warrensburg, Mo.	234	50
KFNL	Radio Broadcast Association, Paso Robles, Cal.	240	10
KFNV	L. A. Drake, Santa Rosa, Cal.	227	5
KFNY	Montana Phonograph Co., Helena, Mont.	243	50
KFNZ	Reynold Radio Co., Burlington, Cal.	231	10
KFOC	First Christian Church, Whittier, Cal.	236	100
KFOD	Radio Shop, Wallace, Idaho	224	10
KFOL	Moberly High School Radio Club, Moberly, Mo.	246	5
KPOL	L. M. Schafbuch, Marengo, Ia.	224	5
KFON	Echophone Radio Shop, Long Beach, Cal.	234	100
KFOO	Latter Day Saints University, Salt Lake City, Utah	261	10
KFOR	David City Tire and Electric Co., David City, Neb.	226	10
KFOT	College Hill Radio Club, Wichita, Kan.	231	50
KFOU	Hommel Mfg. Co., Richmond, Cal.	254	100
KFOX	Technical High School, Omaha, Neb.	248	100
KFOY	Beacon Radio Service, St. Paul, Minn.	226	50
KFOZ	Hudson R. E. Co., Fort Smith, Ark.	233	25
KFBP	E. J. Brown, Seattle, Wash.	224	15
KFTG	Garrison & Dennis, Los Angeles, Cal.	238	100
KFPH	H. C. Mailander Co., Salt Lake City, Utah	242	50
KFPL	C. C. Baxter, Dublin, Tex.	252	20
KFPM	New Furniture Co., Greenville, Tex.	242	10
KFPP	G. & G. Radio and Electric Co., Olympia, Wash.	236	20
KFPR	Forestry Department, Los Angeles, Cal.	221	500
KFFT	Cope & Johnson, Salt Lake City, Utah	248	500
KFPV	Heintz & Kolmoos, San Francisco, Cal.	256	50
KFPW	Methodist Episcopal Church, Cartersville, Mo.	266	20
KFPX	First Presbyterian Church, Pine Bluff, Ark.	242	100
KFPY	Symonds Investment Co., Spokane, Wash.	263	100
KFQA	The Principia, St. Louis, Mo.	261	50
KFQB	Searchlight Publishing Co., Fort Worth, Tex.	254	100
KFQC	Kidd Bros., Taft, Cal.	231	100
KFQD	Chovin Supply Co., Anchorage, Alaska	289	100
KFQE	Dickenson-Henry Radio Laboratories, Colorado Springs, Colo.	224	25
KFQG	Southern California Radio Association, Los Angeles, Cal.	229	100
KFQH	Albert Sherman, Burlington, Cal.	231	50
KFQL	State Fair Association, Muskogee, Ok.	252	20
KFQM	Texas Highway Bulletin, Austin, Tex.	268	100
KFQN	Taird Baptist Church, Portland, Ore.	283	5
KFQP	G. S. Carson Jr., Iowa City, Ia.	224	10
KFQR	W. L. Ellis, Oklahoma City, Ok.	250	10
KFQT	National Guard, Denison, Tex.	252	10
KFQU	W. Riker, Holy City, Cal.	234	100
KFQV	Omaha Grain Exchange, Omaha, Neb.	221	100
KFQW	F. C. Knierim, North Bend, Wash.	248	50
KFQX	A. M. Hubbard, Seattle, Wash.	233	250
KFQY	Farmers' State Bank, Belden, Neb.	273	10
KFQZ	Taft Radio Co., Hollywood, Cal.	250	250
KFRB	Hall Bros., Beville, Tex.	248	250
KFRD	Radioart Studio, San Francisco, Cal.	230	5
KFRP	W. R. Brown, Alexandria, La.	242	10

Station	Owner and Location	Wave Length Meters	Power Watts
KFRH	M. N. Monson, Grafton, N. D.	248	10
KFRJ	Guy Simmons Jr., Conway, Ark.	250	10
KFRK	Men's Club, Grand Forks, N. D.	240	10
KFRM	J. F. Boland, Fort Sill, Ok.	263	5
KFRN	M. L. Short, Hanford, Cal.	224	5
KFRP	Curtis Print Co., Fort Worth, Tex.	246	50
KFRQ	Trinity Church, Redlands, Cal.	211	5
KFRR	Radio Service Co., Portland, Ore.	213	5
KFRS	Nebraska Buick Auto Co., Lincoln, Neb.	240	200
KFRW	United Churches, Olympia, Wash.	220	100
KFRX	J. G. Klemgard, Pullman, Wash.	217.5	10
KFRY	College of Agriculture, State College, N. M.	266	10
KFRZ	The Electric Shop, Hartington, Neb.	222	15
KFSG	Echo Park Evangelistic Association, Los Angeles, Cal.	278	100
KFSY	The Van Blaricom Co., Helena, Mont.	248	10
KFUJ	Hoppert P. & H. Co., Breckenridge, Minn.	242	10
KFUL	T. Goggan & Bro., Galveston, Tex.	251	10
KFUM	W. O. Corley, Colorado Springs, Colo.	243	100
KFVU	Concordia Theological Seminary, St. Louis, Mo.	249.1	500
KTHS	New Arlington Hotel, Hot Springs, Ark.	275	200
KTI	E. C. Anthony, Inc., Los Angeles, Cal.	469	1500
KGB	The Ledger, Tacoma, Wash.	252	50
KGO	General Electric Co., Oakland, Cal.	312	1500
KGU	M. A. Mulrony, Honolulu, Hawaii	289	500
KGW	The Oregonian, Portland, Ore.	492	500
KGY	St. Martin's College, Lacey, Wash.	258	5
KHJ	The Times, Los Angeles, Cal.	395	500
KHQ	Louis Wasmor, Seattle, Wash.	260	100
KJQ	C. O. Gould, Stockton, Cal.	360	100
KJH	Northwest Radio Co., Seattle, Wash.	213	100
KJS	Bible Institute of Los Angeles, Los Angeles, Cal.	252	500
KLS	Warner Bros. Radio Co., Oakland, Cal.	260	250
KLX	The Tribune, Oakland, Cal.	549.5	500
KLZ	Reynolds Radio Co., Denver, Colo.	243	100
KMJ	San Joaquin L. & P. Corp., Fresno, Cal.	248	10
KMO	Love Electric Co., Tacoma, Wash.	360	10
KNT	Walter Hemrich, Kuka Bay, Alaska	283	100
KNY	The Express, Los Angeles, Cal.	337	100
KOA	General Elec. Co., Denver, Colo.	323	1500
KOB	College of Agri. & Mech. Arts, State College, N. M.	360	100
KOP	Detroit Police Department, Detroit, Mich.	278	50
KPO	Hale Bros., San Francisco, Cal.	423	100
KQV	Doubleday Hill Elec. Co., Pittsburgh, Pa.	275	50
KQW	C. D. Herold, San Jose, Cal.	240	50
KRE	The Gazette, Berkeley, Cal.	275	50
KSD	The Post-Dispatch, St. Louis, Mo.	549.1	500
KTW	First Presbyterian Church, Seattle, Wash.	360	750
KUO	Examiner Printing Co., San Francisco, Cal.	360	100
KWG	Portable Wireless Tel. Co., Stockton, Cal.	360	100
KWH	The Examiner, Los Angeles, Cal.	360	100
KYQ	The Electric Shop, Honolulu, Hawaii	270	100
KTW	Westinghouse E. & M. Co., Chicago, Ill.	525.4	1500
KZM	P. D. Allen, Oakland, Cal.	360	100
WAAB	V. Jensen, New Orleans, La.	263	100
WAAC	Tulane University, New Orleans, La.	360	400
WAAD	Ohio Mech. Institute, Cincinnati, O.	360	50
WAAP	Drovers' Journal, Chicago, Ill.	274	50
WAAN	L. R. Nelson Co., Newark, N. J.	263	100
WAAS	University of Missouri, Columbia, Mo.	254	10
WAAT	Omaha Grain Exchange, Omaha, Neb.	286	100
WABE	Harrisburg Sporting Goods Co., Harrisburg, Pa.	266	10
WABD	Parker High School, Dayton, O.	283	10
WABG	Arnold Edwards & Co., Jacksonville, Fla.	275	10
WABH	Lake Shore Tire Co., Sandusky, O.	240	20
WABI	Bingor Ry. & Elec. Co., Bangor, Me.	240	100
WABL	Agricultural College, Storrs, Conn.	283	100
WABM	F. E. Doherty Radio Service Co., Saginaw, Mich.	261	100
WABN	Ott Radio, Inc., La Crosse, Wis.	244	100
WABO	Lake Avenue Baptist Church, Rochester, N. Y.	275	10
WABQ	Haverford College Radio Club, Haverford, Pa.	261	50
WABR	Scott High School, Toledo, O.	263	10
WABU	Victor Talking Machine Co., Camden, N. J.	226	10
WABV	College of Wooster, Wooster, O.	296.5	20
WABW	College of Wooster, Wooster, O.	296.5	20
WABX	H. B. Joy, Mount Clemens, Mich.	254	100
WABY	John Magaldi, Philadelphia, Pa.	243	50
WABZ	Coliseum Place Baptist Church, New Orleans, La.	263	10
WAHG	A. H. Grebe Co., Richmond Hill, N. Y.	316	200
WBS	D. W. May, Inc., Newark, N. J.	260	50
WBT	Southern Radio Co., Charlotte, N. C.		

Station	Owner and Location
WBZ	Westinghouse E. & M. Co., field, Mass.
WBAA	Purdie University, W. yette, Ind.
WBAN	Wireless Phone Corp., son, N. J.
WBAO	James Millikin University, Ill.
WBAP	Star-Telegram, Ft. Worth, Tex.
WBAV	Erner Hopkins Co., Ohio
WBAX	J. H. Stenger Jr., barre, Pa.
WBBA	Plymouth Congregational Church, Newark, O.
WBBD	Barbery Battery Serv. ing, Pa.
WBBF	Georgia College of T. lanta, Ga.
WBBS	I. Vermilya, Mattapoisett, Mass.
WBBI	J. Irving Bell, Port. Mich.
WBBJ	National Electric Co., Palm Beach, Fla.
WBBL	Grace Covenant Pres. Church, Richmond, Va.
WBBM	H. L. Atlas, Chicago, Ill.
WBBP	Potoskey High School, key, Mich.
WBBR	People's Pulpit As. Roseville, N. Y.
WBBS	First Baptist Church, Iowa, La.
WBBS	Jenks Motor Sales Co., mouth, Ill.
WBBS	Johnstown Radio Co., town, Pa.
WBBS	Ruffner City High School, Va.
WBBS	Washington Light Charleston, S. C.
WBBS	N. B. Watson, Indiana
WBBS	Poster & McDonnell, Ill.
WBBS	Sut. Baer & Fuller Co., Mo.
WBBS	Texas Market Department, tin, Tex.
WBBS	Detroit Free Press, Detroit, N. Y.
WBBS	St. Lawrence University, ton, N. Y.
WBBS	Kaufman & Baer, Pa.
WBBS	C. R. Randall, New Or.
WBBS	Entrekin Electric Co., bus, O.
WBBS	Nebraska Wesleyan U. University Place, Neb.
WBBS	A. P. Daniels, Houston
WBBS	St. Olaf College, N. Minn.
WBBS	Sanders & Stayman, Md.
WBBS	C. & P. Tel. Co., Wa.
WBBS	Southern Radio Corp., ton, Tex.
WBBS	Dunwoody Institute, M. ls, Minn.
WBBS	School of Mines, Rap. S. D.
WBBS	Durham & Co., Phil. Pa.
WBBS	Dice Elec. Co., Little R.
WBBS	University of Vermont, ington, Vt.
WBBS	Civic Broadcasting As. Milwaukee, Wis.
WBBS	Carthage College, Cart. Waba, Cal.
WBBS	W. Heinbach, Allent. Waba, Cal.
WBBS	University of Michig. Arbor, Mich.
WBBS	W. G. Voliva, Zion, Ill.
WBBS	Uhalt, Radio Co., New La.
WBBS	H. S. Williams, Pa. Miss.
WBBS	University of Mississ. ford, Miss.
WBBS	Nicol, Duncan & Rush. Tenn.
WBBS	J. C. Mans, Jennings, I.
WBBS	E. R. Hall, St. Petersb. Fla.
WBBS	Northern Radio Mfg. Co. ton, Me.
WBBS	Charles Schwarz, Baltit. Tenn.
WBBS	Radio Shop, Inc., M. Tenn.
WBBS	First Baptist Church, N. Tenn.
WBBS	C. H. Messer, Providen. Mass.
WBBS	Clark University, W. Mass.
WBBS	Arnold Wireless Co., Pa.
WBBS	Tallahoma Radio Club, home, Tenn.
WBBS	G. P. Rankin Jr., Mac. Waba, Cal.
WBBS	Forks Electrical Shop, Hill Falls, Pa.
WBBS	Coppoteil Bros., Heights, Ill.
WBBS	Washburn-Crosby Co., apolis, Minn.
WBBS	C. E. Erbsstein, Elgin, I. Church of the Covenant, ington, D. C.
WBBS	J. L. Bush, Tuscola, Ill.
WBBS	Times Daily Times, Fla.
WBBS	Mass City Star, Kansas, Mo.
WBBS	J. L. Martin, Amarillo, Tex.
WBBS	Trinity Methodist Church, Minn.

Stations in the United States and Their Wavelengths

Station	Owner and Location	Wave Length Meters	Power Watts	Station	Owner and Location	Wave Length Meters	Power Watts	Station	Owner and Location	Wave Length Meters	Power Watts	Station	Owner and Location	Wave Length Meters	Power Watts
WABN	Wireless Phone Corp., Paterson, N. J.	244	100	WDBB	A. H. Walte & Co., Taunton, Mass.	229	10	WGL	Thos. F. J. Howlett, Philadelphia, Pa.	260	500	WGBA	Jones Elec. & Radio Co., Baltimore, Md.	254	50
WBAO	James Millikin University, Decatur, Ill.	275	50	WDBH	H. E. Burns, Martinsburg, W. Va.	268	50	WGA	Yoursel Hotel, Shreveport, La.	262	150	WGBB	H. H. Carman, Freeport, N. Y.	244	100
WBAP	Star-Telegram, Ft. Worth, Tex.	480	500	WDBI	Radio Spec. Co., St. Petersburg, Fla.	226	10	WGBL	First Baptist Church, Memphis, Tenn.	266	10	WGBS	Gimbel Brothers, New York, N. Y.	316	1000
WBAV	Erner Hopkins Co., Columbus, Ohio	423	500	WDBJ	Richardson Wayland Elec. Co., Roanoke, Va.	229	20	WGBU	University of Wisconsin, Madison, Wis.	275	500	WGBV	Radio Corp. of Am., New York, N. Y.	465	500
WBAX	J. H. Stenger Jr., Wilkes-Barre, Pa.	254	20	WDBL	Department of Markets, Stevens Point, Wis.	278	500	WGBW	Radio Corp. of Am., New York, N. Y.	465	500	WGBX	Radio Corp. of Am., New York, N. Y.	465	500
WBBA	Plymouth Congregational Church, Newark, O.	226	20	WDBM	Electric Light and Power Co., Bangor, Me.	252	5	WGBY	Radio Corp. of Am., New York, N. Y.	465	500	WGBZ	Radio Corp. of Am., New York, N. Y.	465	500
WBBD	Barbery Battery Service, Reading, Pa.	234	50	WDBN	Rollins College, Winter Park, Fla.	240	50	WGBA	Radio Corp. of Am., New York, N. Y.	465	500	WGBD	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	Georgia College of Tech., Atlanta, Ga.	270	500	WDBP	State Normal School, Superior, Wis.	261	50	WGBE	Radio Corp. of Am., New York, N. Y.	465	500	WGBF	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	I. Vermilya, Mattapoisett, Mass.	248	100	WDBQ	Morton Radio Supply Co., Salem, N. J.	234	10	WGBG	Radio Corp. of Am., New York, N. Y.	465	500	WGBH	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	J. Irving Bell, Port Huron, Mich.	265.4	50	WDBR	Tremont Temple Baptist Church, Boston, Mass.	256	100	WGBI	Radio Corp. of Am., New York, N. Y.	465	500	WGBJ	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	National Electric Co., West Palm Beach, Fla.	253	50	WDBS	S. M. K. Radio Corp., Dayton, O.	275	5	WGBK	Radio Corp. of Am., New York, N. Y.	465	500	WGBL	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	Grace Covenant Presbyterian Church, Richmond, Va.	229	50	WDBT	Taylor's Book Store, Hattiesburg, Miss.	236	10	WGBM	Radio Corp. of Am., New York, N. Y.	465	500	WGBN	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	H. L. Atlas, Chicago, Ill.	226	200	WDBU	Radio Den, Columbia, Tenn.	268	20	WGBP	Radio Corp. of Am., New York, N. Y.	465	500	WGBQ	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	Pease High School, Potosi, Mo.	214.2	10	WDBV	North Side Congregational Church, Chicago, Ill.	258	500	WGBR	Radio Corp. of Am., New York, N. Y.	465	500	WGBS	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	People's Pulpit Association, Roseville, N. Y.	273	500	WDBW	Boy Scouts of America, Kingston, N. Y.	233	5	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBU	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	First Baptist Church, New Orleans, La.	252	50	WDBX	The Benwood Co., St. Louis, Mo.	273	250	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBV	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	Jenks Motor Sales Co., Monmouth, Ill.	224	10	WDBY	Hubert Still Elec. Co., Houston, Tex.	263	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBW	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	Johnstown Radio Co., Johnstown, Pa.	248	5	WDBZ	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBX	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	Ruffner City High School, Norfolk, Va.	222	50	WDBA	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBY	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	Washington Light Infantry, Charleston, S. C.	268	10	WDBB	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBZ	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	N. B. Watson, Indianapolis, Ind.	227	50	WDBC	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBA	Radio Corp. of Am., New York, N. Y.	465	500
WBBS	Poster & McDonnell, Chicago, Ill.	286	500	WDBD	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Stix, Baer & Fuller Co., St. Louis, Mo.	273	100	WDBE	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Texas Market Department, Austin, Tex.	268	250	WDBF	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Detroit Free Press, Detroit, Mich.	516	500	WDBG	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	St. Lawrence University, Canton, N. Y.	263	350	WDBH	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Kaufman & Baer, Pittsburgh, Pa.	463	500	WDBI	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	C. R. Randall, New Orleans, La.	268	50	WDBJ	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Entrekin Electric Co., Columbus, O.	260	100	WDBK	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Nebraska Wesleyan University, University Place, Neb.	260	500	WDBL	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	A. P. Daniels, Houston, Tex.	260	500	WDBM	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	St. Olaf College, Northfield, Minn.	360	500	WDBN	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Sanders & Stayman, Baltimore, Md.	275	50	WDBP	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	C. & P. Tel. Co., Washington, D. C.	469	500	WDBQ	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Southern Radio Corp., San Antonio, Tex.	262	100	WDBR	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Dunwoody Institute, Minneapolis, Minn.	280	100	WDBS	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	School of Mines, Rapid City, S. D.	240	100	WDBT	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Durham & Co., Philadelphia, Pa.	278	500	WDBU	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Dice Elec. Co., Little Rock, Ark.	262	10	WDBV	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	University of Vermont, Burlington, Vt.	360	50	WDBW	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Clive Broadcasting Association, Milwaukee, Wis.	266	250	WDBX	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Carthage College, Carthage, Ill.	246	50	WDBY	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	C. W. Heimbach, Allentown, Pa.	254	10	WDBZ	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	University of Michigan, Ann Arbor, Mich.	229	200	WDBA	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	W. G. Voliva, Zion, Ill.	345	500	WDBB	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Thalt Radio Co., New Orleans, La.	263	5	WDBC	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	H. S. Williams, Pascagoula, Miss.	268	10	WDBD	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	University of Mississippi, Oxford, Miss.	242	20	WDBE	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Nicolai, Duncan & Rush, Bemis, Tenn.	240	100	WDBF	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	J. C. Mans, Jennings, La.	244	10	WDBG	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	E. R. Hall, St. Petersburg, Fla.	266	500	WDBH	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Northern Radio Mfg. Co., Houston, Me.	280	50	WDBI	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Charles Schwarz, Baltimore, Md.	229	50	WDBJ	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Radio Shop, Inc., Memphis, Tenn.	250	20	WDBK	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	First Baptist Church, Nashville, Tenn.	286	100	WDBL	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	C. H. Messer, Providence, R. I.	246	5	WDBM	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Clark University, Worcester, Mass.	238	250	WDBN	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Arnold Wireless Co., Arnold, Pa.	220	50	WDBP	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Tallahumma Radio Club, Tallahassee, Fla.	262	10	WDBQ	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	G. P. Rankin Jr., Macon, Ga.	226	10	WDBR	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Forks Electrical Shop, Buck Hill Falls, Pa.	268	10	WDBS	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Coppotelli Bros., Chicago Heights, Ill.	248	50	WDBT	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Washburn-Crosby Co., Minneapolis, Minn.	417	500	WDBU	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	C. E. Erbstein, Elgin, Ill.	535.4	1000	WDBV	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Church of the Covenant, Washington, D. C.	224	50	WDBW	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	J. L. Bush, Tuscola, Ill.	278	100	WDBX	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Tampa Daily Times, Tampa, Fla.	273	250	WDBY	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Kansas City Star, Kansas City, Mo.	411	500	WDBZ	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	J. L. Martin, Amario, Tex.	263	100	WDBA	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500
WCB	Trinity Methodist Church, El Paso, Tex.	263	100	WDBB	St. Louis University, St. Louis, Mo.	260	100	WGBT	Radio Corp. of Am., New York, N. Y.	465	500	WGBB	Radio Corp. of Am., New York, N. Y.	465	500

Continued on Page 6.

INTERNATIONAL MORSE CODE AND CONVENTIONAL SIGNALS To Be Used for All General Public Service Radio Communication

1. A dash is equal to three dots.
2. The space between parts of the same letter is equal to one dot.
3. The space between two letters is equal to three dots.
4. The space between two words is equal to five dots.

A —	N —	1 —
B —	O —	2 —
C —	P —	3 —
D —	Q —	4 —
E —	R —	5 —
F —	S —	6 —
G —	T —	7 —
H —	U —	8 —
I —	V —	9 —
J —	W —	0 —
K —	X —	
L —	Y —	
M —	Z —	

Period .....	.....
Semicolon .....	.....
Comma .....	.....
Colon .....	.....
Interrogation .....	.....
Exclamation point .....	.....
Apostrophe .....	.....
Hyphen .....	.....
Bar indicating fraction .....	.....
Parenthesis .....	.....
Inverted commas .....	.....
Underline .....	.....
Double dash .....	.....
Distress call .....	.....
Attention call to precede every transmission .....	.....
General inquiry call .....	.....
From (de) .....	.....
Invitation to transmit (go ahead) .....	.....
Warning—high power .....	.....
Question (please repeat after) .....	.....
Wait .....	.....
Break (bk.) (double dash) .....	.....
Understand .....	.....
Error .....	.....
Received (O. K.) .....	.....
Position report (to precede all position messages) .....	.....
End of each message (cross) .....	.....
Transmission finished (end of work) (conclusion of correspondence) .....	.....

A KSD SOLOIST OF THE WEEK



A member of the choir of St. Michael and All Angels' Church. She will give a recital Tuesday night, assisted by John Tiedeman, baritone.

Complete List of Broadcasting Stations in the United States and Their Wavelengths

(Continued From Page 5.)

Station	Owner and Location	Wave Length Meters	Power Watts	Station	Owner and Location	Wave Length Meters	Power Watts
WMAZ—Mercer University, Macon, Ga.	261	100	WPAU—Concordia College, Moorhead, Minn.	286	10	WSAC—Clemson Agricultural College, Clemson College, S. C.	360
WNJ—Radio Shop, Newark, N. J.	233	100	WPAZ—Dr. J. H. Koch, Charleston, W. Va.	263	10	WSAD—J. A. Foster Co., Providence, R. I.	261
WNAC—Shepard-Stores, Boston, Mass.	230	500	WQJ—Calumet Radio Broadcasting Co., Chicago, Ill.	443	500	WSAI—U. S. Playing Card Co., Cincinnati, O.	236
WNAD—University of Oklahoma, Norman, Ok.	254	100	WQAA—H. A. Beale Jr., Parkersburg, Pa.	220	500	WSAJ—Grove City College, Grove City, Pa.	258
WNAL—Omaha Central High School, Omaha, Neb.	258	20	WQAC—Gish Radio Service, Amarillo, Tex.	234	100	WSAN—Allentown Call, Allentown, Pa.	229
WNAP—Wittenberg College, Springfield, O.	248	100	WQAE—Moore Radio News Station, Springfield, Vt.	275	50	WSAP—City Temple, New York, N. Y.	243
WNAR—First Christian Church, Butler, Mo.	231	20	WQAL—Cole County T. and T. Co., Mattoon, Ill.	258	10	WSAR—Doherty & Welsh Elec. Co., Fall River, Mass.	254
WNAT—Lenning Bros. Co., Philadelphia, Pa.	250	100	WQAM—Electric Equipment Co., Miami, Fla.	268	250	WSAX—Chicago Radio Laboratory, Chicago, Ill.	243
WNAX—Dakota Radio App. Co., Yankton, S. D.	244	100	WQAN—The Scranton Times, Scranton, Pa.	230	50	WSAZ—Chase Radio Co., Pomeroy, O.	243
WNYC—Municipal Station, New York, N. Y.	523.8	1000	WQAO—Calvary Baptist Church, New York, N. Y.	260	100	WSOE—School of Engineering, Milwaukee, Wis.	246
WOAC—Page Organ Co., Lima, O.	266	50	WQAP—West Texas Radio Co., Abilene, Tex.	360	100	WSUI—State University of Iowa, Iowa City, Ia.	433
WOAE—Midland College, Fremont, Neb.	280	15	WQAS—Prince Walter Co., Lowell, Mass.	266	100	WTG—Kansas State Agricultural College, Manhattan, Kan.	273
WOAF—Tyler Commercial College, Tyler, Tex.	360	20	WRC—Radio Corp. of America, Washington, D. C.	469	500	WTAB—Fall River Daily Herald, Fall River, Mass.	266
WOAI—South. East Equipment Co., San Antonio, Tex.	385	500	WRK—Doron Bros. Elec. Co., Hamilton, O.	270	200	WTAC—Penna. Traffic Co., Johnstown, Pa.	209
WOAN—Vaughn, Conservatory of Music, Lawrenceburg, Tenn.	360	150	WRM—University of Illinois, Urbana, Ill.	273	500	WTAF—L. J. Gallo, New Orleans, La.	268
WOAR—H. P. Lundskow, Kenosha, Wis.	229	50	WRR—Dallas Police and Fire Dept., Dallas, Tex.	261	200	WTAL—Toledo Radio and Elec. Co., Toledo, O.	240
WOAV—Pennsylvania National Guard, Erie, Pa.	242	100	WRW—Tarrytown Research Laboratory, Tarrytown, N. Y.	273	150	WTAM—Willard Storage Battery Co., Cleveland, O.	290
WOAW—Woodmen of the World, Omaha, Neb.	522.3	500	WRAA—Rice Institute, Houston, Tex.	256	100	WTAP—Cambridge Radio Elec. Co., Cambridge, Ill.	242
WOAX—F. J. Wolff, Trenton, N. J.	240	500	WRAF—Radio Club, Inc., Laporte, Ind.	234	20	WTAQ—S. Van Gordon & Son, Oaseo, Wis.	264
WOC—Palmer School of Chiropractic, Davenport, Ia.	493	500	WRAL—Northern States Power Co., St. Croix Falls, Wis.	248	100	WTAR—Reliance Radio and Elec. Co., Norfolk, Va.	230
WOCL—Hotel Jamestown, Jamestown, N. Y.	275	15	WRAM—Lombard College, Galesburg, Ill.	244	250	WTAS—Charles E. Erbstein, Elgin, Ill.	234
WOI—Iowa State College, Ames, Ia.	360	500	WRAN—Black Hawk Elec. Co., Waterloo, Ia.	236	10	WTAT—Edison Elec. Ill. Co. (Portable), Boston, Mass.	246
WOO—John Wanamaker, Philadelphia, Pa.	509.9	500	WRAO—Radio Service Co., St. Louis, Mo.	227	10	WTAU—Ruegg Battery and Elec. Co., Tecumseh, Neb.	242
WQO—Unity School of Christianity, Kansas City, Mo.	278	500	WRAV—Antioch College, Yellow Springs, O.	263	100	WTAW—Agricultural and Mech. College, College Station, Tex.	270
WOR—L. Bamberger & Co., Newark, N. J.	405	500	WRAW—Avenue Radio Shop, Reading, Pa.	238	10	WTAX—Williams Hardware Mfg. Co., Streator, Ill.	231
WORD—Peoples Pulpit Ass'n, Batavia, Ill.	278	500	WRAX—Flexon's Garage, Gloucester City, N. J.	268	100	WTAY—Oak Leaves Broadcasting Ass'n, Oak Park, Ill.	250
WOS—Missouri State Marketing Bureau, Jefferson City, Mo.	433.5	500	WRBC—Immanuel Lutheran Church, Valparaiso, Ind.	278	500	WTBZ—T. J. McGuire, Lambertville, N. J.	261
WPG—Municipality of Atlantic City, N. J.	296	500	WREO—Reo Motor Co., Lansing, Mich.	286	500	WWI—Ford Motor Co., Dearborn, Mich.	273
WPAB—Penn. State College, State College, Pa.	261	500	WRHF—Radio Hospital Fund, Washington, D. C.	254	50	WWJ—The Detroit News, Detroit, Mich.	510
WPAC—Donaldson Radio Co., Okmulgee, Ok.	360	200	WSB—The Atlanta Journal, Atlanta, Ga.	429	500	WWL—Loyola University, New Orleans, La.	280
WPAJ—Doolittle Radio Corp., New Haven, Conn.	268	10	WSL—J. & M. Elec. Co., Utica, N. Y.	273	100	WWAD—Wright & Wright Inc., Philadelphia, Pa.	250
WPAL—N. D. Agricultural College, Agricultural College, N. D.	375	50	WSAB—S. E. Mo. State Teachers' College, Cape Girardeau, Mo.	375	100	WWAE—Alama Ballroom, Joliet, Ill.	242
						WWAO—College of Mines, Houghton, Mich.	244

*Indicates experimental wavelength.

ARTIST



CENTRAL WEST

FEATURES ON KSD PROGRAM NEXT WEEK

STATION KSD will be the pioneer in a new field of radio. For the first time of an artist of international fame, a complete recital in a radio studio. The artist is Francis Macmillen, the American violinist, who will play Monday night, and the program as would be presented in a concert before a discriminating audience of artists and critics.

Music lovers, critics and many over the United States are eagerly anticipating this program, which will include "Symphonie Espagnole," "Lento and Finale from the Moon concerto, and numerous smaller pieces. Macmillen will come to St. Louis for this radio appearance and will begin his program at 9 o'clock Monday evening next week.

Thousands of radio fans who are able to tune in on KSD will rejoice at an artist of Macmillen's reputation. He has consented to lend his talents, if one concert, to the entertainment of vast unseeing audience, and many music hungry persons who have the reach of artistic concert have a treat of rare delight through program.

Macmillen will be assisted at the piano by Mrs. David Kriegshaber, one of St. Louis' foremost artists, and the program as arranged will give adequate opportunity for both. Macmillen's technique, as well as his melodic and exquisite artistry, will have exceptional vehicle in the selection of his recital. The program is given below:

1. (a) Romance
- (b) Prelude and Allegro
2. "Symphonie Espagnole" (Andante and Rondo)
3. (a) Trauermelodie
- (b) Mazurka
- (c) Barcarole
- (d) Introduction and Tarantelle
4. (a) Ave Maria
- (b) Polonaise
5. Andante and Finale from the Concerto

Francis Macmillen was born in Latvia, O., and his career embodies of unbroken successes. He has appeared on numerous occasions with practically every great symphony orchestra.

OF THE WEEK

ARTISTS TO BE HEARD ON KSD PROGRAMS NEXT WEEK



CENTRAL WESLEYAN COLLEGE BAND

MRS. O. H. KLEINSCHMIDT
CONTRALTOFEATURES ON KSD
PROGRAMS
NEXT WEEK

STATION KSD will be this week a pioneer in a new field of radio programs. For the first time on record an artist of international fame will give a complete recital in a radio studio. The artist is Francis Macmillen, the famous American violinist, who will play at KSD Monday night, and the program is such as would be presented in a concert hall before a discriminating audience of artists and critics.

Music lovers, critics and managers all over the United States are eagerly awaiting this program, which will include the Lalo "Symphonie Espagnole," the Andante and Finale from the Mendelssohn concerto, and numerous smaller numbers. Macmillen will come to St. Louis especially for this radio appearance, and will begin his program at 9 o'clock on Monday evening next week.

Thousands of radio fans who are enabled to tune in on KSD will rejoice that an artist of Macmillen's proportions has consented to lend his talents, if only for one concert, to the entertainment of the vast unseen audience, and many shut-ins and music hungry persons who are beyond the reach of artistic concerts will have a treat of rare delight through this program.

Macmillen will be assisted at the piano by Mrs. David Kriegshaber, one of St. Louis' foremost artists, and the program as arranged will give adequate opportunity for both. Macmillen's wonderful technique, as well as his mellow tone and exquisite artistry, will have an exceptional vehicle in the selections scheduled for his recital. The program in full is given below:

1. (a) Romance Sinding
(b) Prelude and Allegro Pugnani-Kreisler
2. "Symphonie Espagnole (Andante and Rondo) Lalo
(a) Traumerel Schumann
(b) Mazurka Zarycki
(c) Barcarole Macmillen
(d) Introduction and Tarentelle Sarasate
(a) Ave Maria Schubert-Wilhelmj
(b) Polonaise Wieniawski
3. Andante and Finale from the Concerto Mendelssohn

Francis Macmillen was born at Marlboro, O., and his career embodies a series of unbroken successes. He has appeared on numerous occasions as soloist with practically every great symphony

NOTED VIOLINIST IN KSD RECITAL

FRANCIS
MACMILLEN
AMERICAN
VIOLIN
VIRTUOSO

orchestra in the world, including the famous Berlin Philharmonic, under Arthur Nikisch; the Vienna Tonkünstler, under Oscar Nedbal; The Halle (England) Orchestra, under Hans Richter; the New London Symphony, under Sir Landon Ronald; the Queen's Hall Orchestra, under Sir Henry Wood, and numerous continental European symphony orchestra organizations.

In America he has been engaged on one or more occasions as soloist with the great Boston Symphony Orchestra in Boston; the Philadelphia Orchestra, under the baton of Leopold Stokowski; the New York Philharmonic Orchestra, under Josef Stransky; the New York Symphony Orchestra, under Walter Damrosch; the National Symphony Orchestra of New York, under Artur Bodanzky; the Cleveland Symphony Orchestra, under Nikolai Sokoloff; the Chicago Symphony Orchestra, under Frederick Stock; the Minneapolis Symphony Orchestra, under Emil Gilels; the Cincinnati Symphony Orchestra; the St. Louis Symphony Orchestra, under Rudolph Ganz, and the Detroit Symphony Orchestra, under Osip Gabrilowitsch.

Much enjoyment is promised to radio fans and music lovers who tune in for KSD this week. Not only is this station to have the noted violin virtuoso, Francis Macmillen, on its week's schedule, but other exceptional programs also are on the list. The night following the Macmillen recital there will be another artist recital in the studio. Mrs. John E. Stoker, soprano, assisted by John Tiedeman, baritone, Mrs. W. H. Bronaugh and Mrs. H. L. Ewald, pianists, will give this program. Mrs. Stoker is one of the popular concert and choir singers of this section, and is widely known through her former operatic and concert appearances in the East and Chicago.

A second studio program announced for the week will be given by the band of Central Wesleyan College, Warrenton, Mo. This band will come down to St. Louis for their concert, bringing with them as soloists Mrs. O. H. Kleinschmidt, contralto, and Carl Fischer, cornetist. The band is composed of students of the college, with Fischer as director.

A novelty on the week's list is the music and special features presented at the monthly dinner dance at the City Club on Saturday, Jan. 31. The program will be given by the City Club Glee Club and orchestra, with solos and quartets by members of the Glee Club.

The regular events of the week will be broadcast, as usual. Monday night the Missouri Theater program will be sent out beginning at 7 o'clock, and will be followed at 9 o'clock by the Macmillen recital. Tonight, KSD will broadcast the revue and other music programs at the Grand Central Theater, and will follow this with the Symphony concert at the Odeon. On Tuesday and Wednesday nights, respectively, the dinner music at the Missouri Athletic Association and Hotel Statler will be broadcast direct from the club and hotel, and on Wednesday evening, also, the dance music played by the Varsity Club Orchestra will be broadcast from Hotel Jefferson.

WHEN KSD WAS
ON THE AIR
18 HOURS

ALTHOUGH there has not been time for reports regarding the international test to be received from foreign countries, other than Mexico, Canada and Cuba, it is believed this program, which was broadcast by Station KSD Jan. 13 and 14 for eighteen hours continuously, has been successful. In the matter of quality of performance and pleasure given to listeners, it was a decided success, according to letters received from those who heard it. Many persons stayed with KSD for the entire eighteen hours. Most of these were in Illinois and Missouri, but listeners as far away as Washington, D. C., and points on the Atlantic Coast also reported having heard the entire program.

Although the test was for distance, many listeners-in considered it an endurance test, as well, for the station, its staff, and the listening public, and some humorously stated that their sets stood the test and that apparently the staff did also, as its members were still going strong at the signing off period. One listener at Tower Hill, Ill., states: "I received the program from the beginning to the end just to try out my receiver on a test of keeping the station without making a change through the program, and I was successful in my test and I hope you were heard at a great distance."

It is believed that KSD established one record at least for a 500-watt station. That was in daylight voice and music broadcasting. The program began at 4 p. m. on Tuesday and ended at 9:55 a. m. Wednesday. It was distinctly heard at Winter Park, Fla., at 7:30 a. m. (Eastern time); at 5:40 p. m. (Eastern time) at Newton Highlands, Mass.; at 7 a. m. (Eastern time) at Rockland, Me., and at 5:35 p. m. (Pacific time) at Manhattan Beach, Cal. A report which reached KSD following the program was that R. S. Gilliam of Fresno, Cal., received a good portion of the program on the night of Jan. 13 on a small crystal set. The reception, according to the report, was clear and strong. Experts at the station rather doubt the reception was altogether on his set, but the incident is an interesting one.

In the matter of the program, and its more than 100 participants, it is believed that no more varied or interesting entertainment could have been arranged, and certainly no greater co-operation could have been given than that accorded KSD by the artists and speakers who took part in the 18-hour test. Two of the performers spent six hours at the station to be on hand as "pinch-hitters" in case of need. These two were Mrs. Ruby Tanner Campbell of Flora, Ill., and Vin James of Belleville, Ill., who gave a joint recital from 6 to 7 a. m. on Jan. 14. Both assisted on several of the programs which preceded their own, going on at various times after midnight.

Their Wavelengths

Station and Location	Wave Length Meters	Power Watts
Agricultural College, S. C.	360	500
Foster Co., Providence	261	100
Daying Card Co., Cincinnati	326	500
City College, Grove City	258	250
Wm. Call, Allentown, Pa.	229	10
Temple, New York, N. Y.	263	250
Y & Welsh Elec. Co., Mass.	254	10
Radio Laboratory, Ill.	268	20
Radio Co., Pomeroy, O.	244	50
of Engineering, Mil. Wis.	246	100
University of Iowa, Iowa	498	500
State Agricultural College, Kan.	273	50
Over Daily Herald, Fall Mass.	266	100
Traffic Co., Johnstown	209	150
Gallo, New Orleans, La.	268	20
Radio and Elec. Co., To.	240	10
Storage Battery Co., Ind. O.	390	1500
Edge Radio Elec. Co., Ill.	242	50
Gordon & Son, Osseo	254	100
Radio and Elec. Co., Va.	280	100
E. Erbsstein, Elgin, Ill.	286	500
Elec. Ill. Co. (Portable), Mass.	244	100
Battery and Elec. Co., Neb.	242	10
Natural and Mech. College, ation, Tex.	270	50
Hardware Mfg. Co., Ill.	231	50
Waves Broadcasting Ass'n., Ill.	250	100
McGuire, Lambertville	261	15
er Co., Dearborn, Mich.	273	50
olt News, Detroit, Mich.	216	500
University, New Orleans	280	100
& Wright Inc., Phila.	250	100
Ballroom, Joliet, Ill.	242	150
of Mines, Houghton	244	250
perimental wavelength		

Fascinating History of the Rise and Progress of Radio

THIS comprehensive outline of the development of radio from its infancy to its present stature as a giant industry was incorporated in an address at the recent Pan-American Conference on Standardization in Lima, Peru.

By DR. ALFRED N. GOLDSMITH.

PRACTICAL radio communication is now more than a quarter of a century old, and may fairly be said to have passed out of its infancy and into its period of early maturity. Radio engineering is rapidly becoming a specialized and exact division of electrical engineering. Commercially, the radio field has reached such proportions that the radio industry takes its place, at least in certain countries, among the major manufacturing and sales industries of these countries. It is fitting, therefore, to consider the trend of radio communication during the last 25 years and to study the evolution of the art during that time.

TECHNICAL EVOLUTION.

SPARK COIL TRANSMITTER AND COHERER RECEIVER—The first stage in radio communication may be termed the epoch of highly damped wave transmission and reception, and relatively non-selective receiving methods using potential operated detecting devices. The typical transmitter during this early period of the art was the spark coil, which produced a relatively infrequent succession of highly damped wave trains in the antenna system. The radiation covered a very wide range of frequencies in its spectrum and was therefore sure to produce marked interference in all receiving sets. The receiving sets were not electrically selective to any considerable extent, and the typical detector was the coherer.

ROTARY SPARK TRANSMITTER, AND CRYSTAL AND ELECTROLYTIC DETECTORS—The second epoch may be called that of the moderate decrement transmitter and the proportionate response detector. During this time spark transmitters, frequently of the rotary gap type, were employed. These gave a more frequent succession of moderately damped wave trains, though still covering a wide range of frequencies in the emission and not permitting truly selective signaling. The receiving set was only moderately selective, it being hardly worth while to increase the selectivity of receiving sets to any considerable extent when using such transmitters. On the other hand, a great improvement was made in the detector system. Crystal or electrolytic detectors were employed. Such detectors were better suited to use with reception by ear than the coherer, and accordingly the speed of operation was greatly increased.

QUENCHED SPARK TRANSMITTER AND THREE-ELECTRODE VACUUM TUBE RECEIVERS—The third epoch in radio communication may be termed that of the low decrement transmitter and the highly sensitive receiver. The transmitter most typical of this epoch is the quenched spark transmitter, which produces a large number of regularly spaced wave trains of low decrement each second. This method of transmission is well adapted to the production of a musical tone in the receiver, and thus permits a considerable degree of psychological discrimination of the signal as against incidental atmospheric disturbances of reception.

The receiving set was either of the crystal detector variety or employed the three-electrode vacuum tube. Audio-frequency amplification also came into vogue. The new tube receivers soon showed the possibility of building receivers of relatively low decrement and high selectivity, and of great sensitiveness. As a result it became possible to choose the desired signal, with at least the partial exclusion of others, and it also became feasible to signal over long distances, particularly during the favorable hours of the day and the best times of the year.

LONG-DISTANCE COMMUNICATION ATTAINED—It became clear at this stage of the evolution of radio communication that the scope and usefulness of the art were rapidly increasing. Whereas in the first epoch, radio was used almost entirely for communication between ship and shore stations (and for occasional military purposes), its use for overland communication increased somewhat during the second epoch; and during the third epoch it even began to be employed for the transoceanic and transcontinental services. Fairly powerful spark transmitters enabled long-distance communication of a hitherto unattainable degree of reliability. As a result of this increase in the use of radio, the congestion of traffic in the ether became very noticeable and engineers bent their best efforts to the production of a transmitting and receiving system which should enable the use of a narrower band of frequencies for each separate transmission.

We thus come to the fourth epoch in (Continued on Next Page.)

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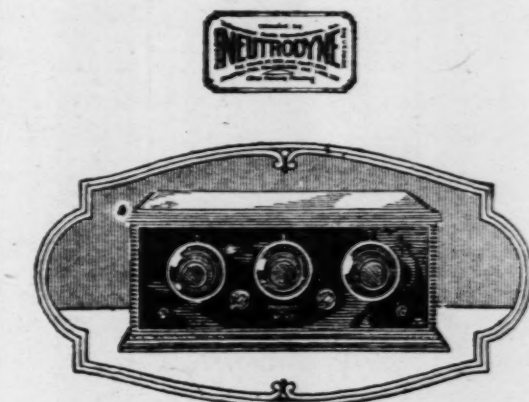
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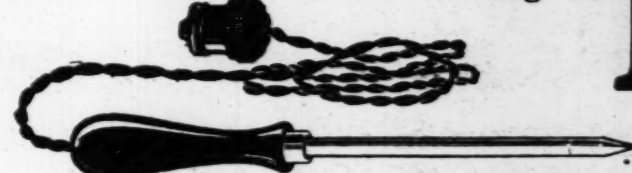
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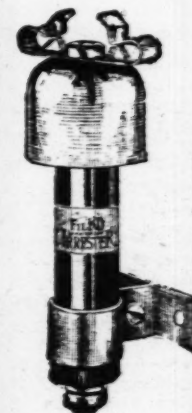


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SEND US YOUR MAIL ORDERS

Fascinating History of the Rise and Progress of Radio

(Continued From Preceding Page.)

radio development, namely, that of the continuous-wave telegraph transmitter and the highly selective receiver based upon heterodyne reception. The transmitters in this case were either arc oscillators or radio-frequency alternators. In contradistinction to all earlier types, they produced continuous-wave trains.

THE OSCILLATING RECEIVER—The receiving set was generally based upon the production of a beat or difference frequency, between the currents produced by the incoming wave and radio-frequency currents of slightly different frequency produced by a local oscillator.

RADIO TELEPHONY, SUPER-RECEPTION—We now come to the fifth epoch in radio communication, namely, that in which we are living. It may be characterized as the age of continuous-wave telegraphy and telephony. While radio telephony had been known long before in an experimental way, it is only during recent times that it has become widely employed and notably for broadcasting purposes. The transmitters used during this era for broadcasting, and in some cases for telegraphy, are continuous-wave transmitters generally employing powerful vacuum-tube oscillators in place of the earlier arc or alternator. The receiver is highly selective and depends, in the best instances, for its selectivity on a succession of tuned electrical circuits either operating at radio frequency, or as in the superheterodyne system, in part operating at a converted or intermediate frequency. Great sensitiveness is obtainable in these receivers, which employ a considerable number of the modern three-electrode vacuum tubes.

During this era, radio communication has become a household necessity in some countries through the advent of broadcasting. The application of radio telephony to marine communication and transoceanic communication between individuals is at hand, but, contrary to some earlier speculation, the radio telephone service of maximum public value has so far turned out to be broadcasting. Indeed, by its very nature, radio telephony is especially well adapted to covering large areas and addressing its message to great bodies of listeners.

COMMERCIAL EPOCHS

EXPERIMENTAL MANUFACTURE—The first commercial era was that of "individual apparatus manufacturing." Small industrial concerns began to make transmitters and receivers, more or less experimentally, and practically always to meet the needs of a particular installation. At most a few sets of a given model would be made for ship or shore stations, and, because of the high rate of obsolescence of equipment, it was not possible to standardize even minor details of the equipment.

SMALL QUANTITY MANUFACTURE; THE AMATEUR—The second commercial epoch was one which may be termed that of the manufacture of small groups of equipment, and came with the increasing development of commercial radio communication, particularly in the marine field, and with the advent of considerable numbers of radio amateurs. As shipping companies came to realize the advantages of radio communication they began to equip their fleets with radio sets on a large scale. Military departments of Governments also became fully aware of the military significance of radio communication and consequently purchased increasing numbers of specially designed sets. The radio amateur purchased equipment, though mostly in component form, rather than as assembled sets. The resulting market for radio equipment enabled a number of manufacturers, including certain electrical concerns, to place on the market equipment which had been built in moderate quantities. The rate of obsolescence and the variable nature of the market were still such as to prevent standardization or the application of modern large-scale production methods to radio manufacture. The sale of radio equipment was also conducted through a distribution system of small proportions. Otherwise stated, the purchaser had to locate the market, and sometimes with some difficulty.

LARGE-SCALE PRODUCTION; ONE MILLION DOLLARS PER DAY—And then, with comparative suddenness, the picture changed. We come to the third and present commercial era of radio, namely, that of large-scale production. With the advent of broadcasting, the market for radio equipment increased to a hitherto unimaginable magnitude. The production of suitable equipment, and particularly of receiving sets, rose to huge proportions. The larger radio and electrical manufacturing concerns applied the most modern and effective methods of large-scale production in their factories with resulting standardization of some part, improvement in the quality and reliability of the product, and a reduction in the cost of its manufacture. Vacuum tubes, hitherto almost a laboratory product, are now produced by the millions in lamp factories. In the United States, the radio sales business has risen to a million dollars per day.

S-S

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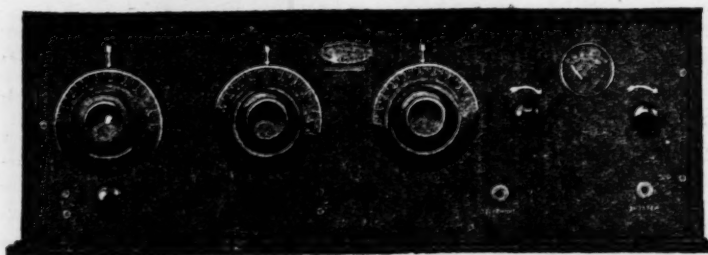
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STATIONS

WEDNESDAY, JAN. 28.
p. m.—Popular songs program.
THURSDAY, JAN. 29.
p. m.—Classical program presented by the Zoellner Conservatory of Music.
FRIDAY, JAN. 30.
p. m.—VI Dodd's Brandstatter Synagogue.
SATURDAY, JAN. 31.
p. m.—Program presented by the Zoellner Conservatory of Music.

FOA—SEATTLE, WASH.
(455 METERS)
(Pacific Time.)

MONDAY, JAN. 26.
p. m.—Remote control from Metropolitan Theater annual Robert Burns anniversary concert, featuring Scottish songs and a full bagpipe band.
TUESDAY, JAN. 27.
p. m.—Artist recital by Miss Carr-Frye.
WEDNESDAY, JAN. 28.
p. m.—Recital by pupils of Paul McNeely.
FRIDAY, JAN. 30.
p. m.—Remote control from University of Washington Glee Club in their annual return concert.
SATURDAY, JAN. 31.
p. m.—U. S. S. Nevada Orchestra—the Navy Jazz Hounds.

J—LOS ANGELES, CAL.
(395 METERS)
(Pacific Time.)

SUNDAY, JAN. 25.
p. m.—Organ recital from First Methodist Episcopal Church.
p. m.—Program arranged by J. Edward Johnson.
MONDAY, JAN. 26.
p. m.—Program presented by Charlie Fellman and his KJL Frolic.
TUESDAY, JAN. 27.
p. m.—Program through the courtesy of Listenwaller and Gough.
p. m.—Broadcasting Earl Burtlett's Dance Orchestra from Biltmore Hotel.
WEDNESDAY, JAN. 28.
p. m.—Program through the courtesy of Pacific Mutual Life Insurance Co.
p. m.—Program presented by Valerio Trio.
p. m.—Broadcasting Earl Burtlett's Dance Orchestra from Biltmore Hotel.
THURSDAY, JAN. 29.
p. m.—Talk on "Art" by Harold Swartz of Otis Art Institute. "Care of the Body," talk by Dr. Philip M. Lovell. Program through the courtesy of Beth Woodruff Nordwall.
p. m.—Broadcasting Earl Burtlett's Dance Orchestra from Biltmore Hotel.
FRIDAY, JAN. 30.
p. m.—Program arranged by G. Albee Phelps.
p. m.—Broadcasting Earl Burtlett's Dance Orchestra from Biltmore Hotel.
SATURDAY, JAN. 31.
p. m.—Program arranged by J. Edward Johnson.
p. m.—Broadcasting Earl Burtlett's Dance Orchestra from Biltmore Hotel.
p. m.—Broadcasting the Lost Angels of KJL. Presenting Majestic Six Orchestra. Ensemble of KJL artists.

KOA—DENVER, COL.
(323 METERS)
(Mountain Time.)

SUNDAY, JAN. 25.
p. m.—Service of the First Church of Christ, Scientist.
MONDAY, JAN. 26.
p. m.—Studio program. Scottish program in honor of Robert Burns, Jan. 25, 1793.
WEDNESDAY, JAN. 28.
p. m.—Studio program. Variety program, sprinkled with vocal and instrumental numbers, in addition to a one-act comedy on "Modesty" and short addresses by D. E. Phillips on "The Future of Civilization," and by Clarke Mitchell on "Does Your Banker Know You?"
FRIDAY, JAN. 30.
p. m.—Studio program, "The Romantic Age," three-act play, presented by newly organized KOA players under the direction of Iris Ruth Favey, music by KOA orchestra.
SATURDAY, JAN. 31.
p. m.—to midnight—Dance music program by Joe Mann and his Rainbow-Lane Orchestra, Shirley-Savoy Hotel.

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KTHS—HOT SPRINGS,
ARK. (375 METERS)
(Central Time.)

SUNDAY, JAN. 25.
8:30 p. m.—Sunday night de Luxe concert by the New Arlington-Meyer Davis 10-piece orchestra.
MONDAY, JAN. 26.
8:30 p. m.—Concert by Arkansas talent.
10:30 p. m.—Dance frolic by Fisher's Exposition Eastern Hotel Orchestra.
TUESDAY, JAN. 27.
8:30 p. m.—Concert music by Fisher's Exposition Orchestra.
WEDNESDAY, JAN. 28.
8:30 p. m.—Concert by the Arkansas State Normal School of Conway, Ark.
10:30 p. m.—Dance frolic by the Eastern Hotel Orchestra.
THURSDAY, JAN. 29.
8:30 p. m.—Concert music by the Meyer Davis Orchestra.
FRIDAY, JAN. 30.
8:30 p. m.—Concert arranged by Mrs. Jack Manier, violinist, of Hot Springs, with assisting artists.
SATURDAY, JAN. 31.
8:30 p. m.—Concert by the McCafferty sextet and other artists.
10:30 p. m.—Dance frolic by the New Arlington-Meyer Davis Orchestra.

KYW—CHICAGO, ILL.
(532.9 METERS)
(Central Time.)

SUNDAY, JAN. 25.
7:00 p. m.—Studio concert.
7:00 p. m.—Chicago Sunday Evening Club.
TUESDAY, JAN. 27.
7:00 p. m.—Dinner concert broadcast from the Congress Hotel.
8:00 p. m.—Musical program. Stella Wenn, soprano; Irving P. Schuster, tenor; Ned Santry, tenor; W. E. Hunter, bag puncher. Speeches under the auspices of the American Farm Bureau Federation.
10 p. m.—"Evening at Home" program.
WEDNESDAY, JAN. 28.
7:00 p. m.—Dinner concert broadcast from the Congress Hotel.
8:00 p. m.—Musical program: Ann Kelley, soprano; James Murray, tenor; Eleanor Taprell, pianist.
9:45 to 10:30 a. m.—Midnight revue.
THURSDAY, JAN. 29.
7:00 p. m.—Dinner concert broadcast from the Congress Hotel.
8:00 p. m.—Musical program.
10 p. m.—"Evening at Home" program.
FRIDAY, JAN. 30.
7:00 p. m.—Dinner concert broadcast from the Congress Hotel.
8:00 p. m.—Speeches under the auspices of the American Farm Bureau Federation.
9:00 to 10 p. m.—Midnight revue.
11 to 12:30 a. m.—Midnight revue continued.
SATURDAY, JAN. 31.
7 p. m.—Dinner concert broadcast from the Congress Hotel.
8:00 p. m.—Musical program. Program this evening will be furnished by the following artists: Ann H. Swanson, contralto; Oscar Heather, tenor; Indiana Maie Quartet.
9:35 p. m.—"Congress Classics."
12 m.—"Congress Carnival," the Congress Hotel.

PWX—HAVANA, CUBA
(400 METERS)
(Eastern Time.)

WEDNESDAY, JAN. 28.
Concert at the Malecon Band stand, by the General Staff Band of the Cuban Army, Capt. Jose Molina Torres, band leader.
SATURDAY, JAN. 31.
Concert at the studio of Station PWX, by the orchestra of Prof. Antonio M. Romeo, with a program of dancing music.

WBCN—CHICAGO, ILL.
(266 METERS)
(Central Time.)

SUNDAY, JAN. 25.
1:00 p. m.—Faith Lutheran Church classical program.
8:00 p. m.—Popular program: Wally Johnson, ukulele entertainer; Midway Dancing Gardens orchestra; Bobby Mebr, blues singer; Borden Brothers, vocal duo; Ned Santry, tenor; Merle "Big Boy" Yagle, pianologist.
TUESDAY, JAN. 27.
8:00 p. m.—Popular program: Midway Dancing Gardens Orchestra; Finney Briggs, extracts from his column, the "Crash Quilt"; F. H. McDonald, president of the Broadcast Listeners' Association, radio talk; Ann Williams, soprano; Al Phillips, tenor; George Forsyth, boy tenor; Ned Santry, tenor; Alvin Fry, tenor; Famous Four, mixed quartet; others to be added.
12:00-1:30 p. m.—Pirate Ship.
WEDNESDAY, JAN. 28.
8:00 p. m.—Amber Furniture Co. popular program; Southtown Harmonizers, vocal trio; Marie Delker, reader; Midway Dancing Gardens Orchestra; Monarch Quartet, vocal; Florence Tenney, blues singer.
9 p. m.—Englewood Overland Co. popular program; Midway Dancing Gardens

LOCAL BROADCASTING NEXT WEEK

K S D—549.1 METERS.
(Central Standard Time.)

MONDAY, JAN. 26, 7:00 P. M.—Music and specialties direct from Grand Central Theater.
9:00 P. M.—Studio recital by Francis MacMillan, famous American violinist, assisted by Mrs. David Kriegshuber at the piano. This is the first complete recital ever given in a radio station studio by a world-famous artist.
TUESDAY, JAN. 27, 8:00 P. M.—Concert by Benjamin Rader's Orchestra direct from Missouri Athletic Club.
9:00 P. M.—Studio recital by Mrs. J. E. Stoker, soprano; Mrs. M. H. Bronaugh, pianist; John Tiedeman, baritone; Mrs. H. L. Ewald, accompanist. Address by J. S. Laurie.
WEDNESDAY, JAN. 28, 8:45 P. M.—Abergh's Concert Ensemble direct from Hotel Statler.
11:00 P. M.—Dance program by Varsity Club Orchestra direct from Hotel Jefferson.
THURSDAY, JAN. 29, 4:00 P. M.—The Home Hour.
FRIDAY, JAN. 30, 8:00 P. M.—Program by Central Wesleyan College Band and Glee Club.
SATURDAY, JAN. 31, 8:00 P. M.—City Club Glee Club and Orchestra direct from City Club.

W C K—273 METERS

MONDAY, JAN. 26, Noon.—Last minute news items and railroad stock report. Popular songs and request numbers by Meyer Levy, tenor and Herbert Koch, pianist. Popular songs by Edna Balsch, piano selections, R. E. Miller. Popular songs by Elmer McDonald.
7:30 P. M.—Sandman Club program; stories by Ruth Overman. Songs by Blanche Rowan, age 11 years. Readings by Adele Isenberg.
8:30 P. M.—Musical program and readings by Alice L. Kluge, Miss Schroepel and Miss Brauer of Collinsville, Ill.
11 P. M.—Gene Rodemich's Orchestra from the Hotel Statler. During intermissions numbers will be given from WCK studio by Johnnie Maher, tenor. Musical numbers by the Midnight Serenaders, accordion, piano, kazoo and ukulele.
TUESDAY, JAN. 27, Noon.—Last minute news items and railroad stock report. Vocal selections by Miss Nellie Boswell. Piano and vocal selections—Estelle Guitkey. Violin selections—Ida Falk.
3:00 P. M.—Address, "Latest Fashions," Mary Allen of the Mix, Baer & Fuller Personal Service Bureau. Piano selections, Irene Ruth. Violin and vocal selections, G. Desmond. Popular songs by Elmer McDonald.
8 P. M.—Radio Dance program by Danny McGinnis's Orchestra.
11 P. M.—Herbert Berger's Orchestra from Coronado Hotel.
WEDNESDAY, JAN. 28, Noon.—Piano selections by Mary Raines. Songs by Ed Goessling. Last minute news items and railroad stock report.
3:00 P. M.—Piano selections, Mrs. A. G. Lieber; vocal selections by Toots Thurman; popular songs by Elmer McDonald.
7:30 P. M.—Sandman Club program; stories by Grace Jackson; songs by Oliver Kinworthy. Reading of letters from members of Sandman Club.
8:00 P. M.—Musical program by Ralph Lechtenberg, baritone; Bridget Murphy, soprano; J. H. Bridges, tenor. Talk on "Purity Essays," Francis B. Randall, Community Section of Missouri Pacific R. R., Y. M. C. A., at Dupe, Ill., by Elmer McDonald.
THURSDAY, JAN. 29, Noon.—Popular songs by Elmer McDonald. Piano selections, J. J. Richardson. Songs by Arnold Price. Last minute news items and railroad stock reports.
3:00 P. M.—Musical program by Stix, Baer & Fuller employees. Claire Goettke, soprano; Paul Schroeder, pianist; Robert McDillaway, tenor.
FRIDAY, JAN. 30, Noon.—Piano selections, Mel Haven. Songs by Elmer McDonald. Vocal selections, Edna Barger. Last minute news items and railroad stock reports.
3:00 P. M.—Vocal selections, Hazel Hanna Finley. Piano selections, Lucille Pruitt. Harmonica selections, Daisy Thompson.
7:30 P. M.—Club program. Reading of letters from children. Stories of Western life by Pawnee Frank. Story for the smaller children by Ethel Cook Barrett.
8:00 P. M.—Broadcasting from the Community Center, the concert of the St. Louis Civic Orchestra, directed by Ellis Levy. Soloists in this concert will be Eileen Hare, soprano; Seward Albright, cornet and the Civic Orchestra string quartet.
11 P. M.—Gene Rodemich's Orchestra from the Hotel Statler. Studio numbers by Johnnie Maher, Homer Meachum and Clarence Ruth.
SATURDAY, JAN. 31, Noon.—Popular songs by Elmer McDonald; Clarinda Burchard, pianist. Violin selections by Kitty Murphy.
3:00 P. M.—Children's program; recitations by Dolores Teasdale. Piano selections by Dorothy Murphy; violin selections by Malvin Klein; piano selections by Bobette Herman.
8:00 P. M.—The play "Little Women" by Louisa M. Alcott given by pupils of Mrs. Chas. M. Horner of East St. Louis, Ill.
11 P. M.—Herbert Berger's Orchestra from the Coronado Hotel.

K F U O—549.1 METERS.

SUNDAY, JAN. 25, 9:15 P. M.—Religious address by the Rev. Herm. Hohenstein, pastor, Christ Lutheran Church. Cello solo by Theo. Brohm. Piano solo by Oscar Rauschebach. Tenor solos by Clarence Kulow.
WEDNESDAY, JAN. 28, 9:15 P. M.—Sermon by Rev. W. Arndt of Concordia Seminary. Vocal selections by the Concordia Four, and selections by the Concordia Seminary Band.

K F Q A—261 METERS.

SUNDAY, JAN. 25, 8:00 P. M.—The regular Sunday evening service at Fourth Church of Christ, Scientist. Subject: "Truth."

Orchestra; Marie Duker, reader; auto talk by official of Englewood Overland Co.; Englewood String Quintet; Southtown Harmonizers, vocal trio; Les Cameron, tenor.
10 p. m.—Midway Dancing Gardens Orchestra.

THURSDAY, JAN. 29.

7:00 p. m.—Classical hour: Helen Callahan, soprano; Jeanette Viademar, soprano; Archer Farrell, pianist; William Ross, tenor; Molly Rosen, pianist.
8:00 p. m.—Popular program: Florence Tenney, soprano; Barn Dance Trio, instrumental; Jack Parker, phonograph record tenor.
8:30 p. m.—Walton School of Commerce program (lectures on income tax and accountancy).
9:00 p. m.—Elmer Jordan & Co., popular program; Midway Dancing Gardens Orchestra; Franz Lazarus, violinist; Al Phillips, tenor; Leona Fay, violinist; Mort Green and Ralph Norris, tenor and pianist; Larry Loser, tenor; Lindsey McPhail, pianist and composer; Jack Parker, phonograph record tenor; Madrid Duo, instrumental.
12:00-1:00 a. m.—Popular program: Jack Parker, tenor; Al Phillips, tenor; Mort Green and Ralph Norris, tenor and pianist; Lindsey McPhail and Addie McPhail, pianist and soprano.

FRIDAY, JAN. 30.

7:00 p. m.—Becker, Ryan & Co. popular program; Will Rositter, tenor; Julius Fisher, one-string fiddler; Roy Miller, tenor; Edna McGuffin, pianist; Zender and Robinson, harmony singers; Harold Johnson, boy xylophonist; Midway Dancing Gardens Orchestra; II Fiore Orchestra; Leo Darnell, banjoist; Alfred Winterfeldt, concertinist.
8:00 p. m.—W. G. Testmeier & Co. program.
10:00 p. m.—Midway Dancing Gardens Orchestra.

SATURDAY, JAN. 31.

7:00-8:00 p. m.—Fireade hour.
8:00-12 p. m.—Popular program: Midway Dancing Gardens Orchestra; George Forsyth, tenor; Southtown Harmonizers, vocal trio; Triangle Trio, instrumental-vocal; Will Dillon, tenor; Englewood String Quintet; Les Cameron, tenor.

6:45 p. m.—Violet Gridley, soprano, accompanied by Don Ramsay.

7:15 p. m.—Course in Poultry Husbandry, by Prof. William C. Monahan.

7:30 p. m.—Educational course in short story writing; lecturer in this course, Joseph D. Kelly, Th. D.

8:00 p. m.—Broadcast, direct from the Boston arena of the pro-hockey game, Boston Bruins vs. Canadians.

9:55 p. m.—Arlington time signals; official United States weather reports.

10:15 p. m.—Hotel Brunswick Orchestra.

WEDNESDAY, JAN. 28.

6:00 p. m.—Leo Reisman's Hotel Lenox Ensemble.

8:00 p. m.—Grace Loomis Kempton, soprano, accompanied by Ruth Kempton.

8:15 p. m.—Talk by Robert Lincoln O'Brien.

8:30 p. m.—Willard Clark, baritone; Benjamin Buxton, accompanist.

8:45 p. m.—Program arranged by DeLancey Cleveland.

9:15 p. m.—Mr. A. E. Vining, harmonica player.

9:30 p. m.—Continuation of DeLancey Cleveland program, presenting saxophonists, violinists and baritone.

10:05 p. m.—Sid Reinherz and orchestra.

THURSDAY, JAN. 29.

6:00 p. m.—Dinner concert by the Westinghouse Philharmonic Trio.

8:00 p. m.—Mrs. Lucy Jewett, soprano, accompanied by Miss Mary Steele.

8:15 p. m.—Wiltworth Band.

8:30 p. m.—Leslie B. Mason, tenor.

9:00 p. m.—McEnelly's Singing Orchestra.

9:30 p. m.—Joan Stuart, entertainer.

9:45 p. m.—Westinghouse Philharmonic Trio.

11:00 p. m.—Hotel Brunswick Orchestra.

11:30 p. m.—Popular song cycle, by the Don Ramsay Four.

SATURDAY, JAN. 31.

6:00 p. m.—Leo Reisman's Hotel Lenox Ensemble.

7:15 p. m.—Sketches from United States naval history, by E. S. R. Brandt.

7:30 p. m.—Concert by the Hotel Gimball Trio, direct from the Hotel Kilmall dining room.

8:00 p. m.—Broadcast, direct from the Boston arena, of the B. A. A. track and field games.

WCB D—ZION CITY, ILL.
(345 METERS)
(Central Time.)

SUNDAY, JAN. 25.
8:00 p. m.—Program given by the Male Chorus and the Hire Trio, assisted by the following performers: Messrs. Rendall Perreman, Dryer and Hendricks, Clarinet Quartet; Mr. George Beem, marimba; Carey Sisters, vocal duet; Mrs. J. D. Thamos, soprano; Miss Edith Carey, contralto; Mrs. Marlon Moulton Priddy, piano; Mrs. John A. Marshall, reader.
MONDAY, JAN. 26.
8:00 p. m.—Program given by the McElroy Saxophone Quintet, assisted by the following performers: Messrs. Mehaffey, Rendall, Sach and McElroy, celestial bells; Misses Esther Wiedman and Pearl Ludlow and Mrs. Evelyn Depew, vocal trio; Mrs. Evelyn Uhlik Depew, contralto; Mr. E. B. Paxton, baritone; Mr. Hermann Becker, cello; Mr. Richard F. Hire, piano; Mrs. Edna Huston Paxton, reader.
THURSDAY, JAN. 29.
8:00 p. m.—Program given by the Mixed Quartet, assisted by the following performers: Miss Hollingshead, Mrs. Hire and Mrs. Ruth, flute, viola and harp; Mrs. Carl Huth, harp, Miss Hollingshead, flute; Mrs. L. J. Hire, viola; Mr. Daniel Mason, trombone; Mr. and Mrs. R. M. Steed, tenor and soprano; Mr. Joseph Bishop, baritone; Mrs. S. D. Inman, soprano; Miss Dorothy Schad, piano; Mrs. Hulda Klammer, reader.

WCCO—MINNEAPOLIS,
MINN. (417 METERS)
(Central Time.)

SUNDAY, JAN. 25.
7:20 p. m.—Second Church of Christ, Scientist, Minneapolis.
9:15 p. m.—Classical concert.
MONDAY, JAN. 26.
8:30 p. m.—Third Infantry Band, Carl Dillon, leader. Travelogue on Japan, Korea and Manchuria, Capt. Raymond C. Wolfe.
10:00 p. m.—Dance program, Dick Long's Nankin Cafe Orchestra; Lou Emmel, baritone.

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RADIO PROGRAMS FOR THE WEEK—Continued

TUESDAY, JAN. 27.
6:30 p. m.—Dinner concert, Biley's Concert Orchestra.
WEDNESDAY, JAN. 28.
7:00 p. m.—Midweek church service, Salvation Army, Col. W. S. Barker.
9:00 p. m.—Musical program.
10:00 p. m.—Dance program, Arnold Frank's Casino Orchestra, St. Paul Hotel.
THURSDAY, JAN. 29.
8:15 p. m.—Musical program.

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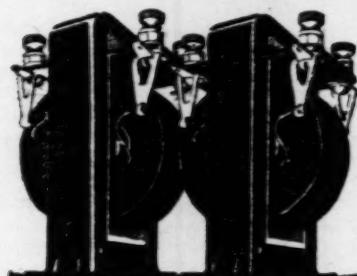
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10:00 p. m.—Dance program, Dick Long's
Nankin Cafe Orchestra.
FRIDAY, JAN. 30.
6:30 p. m.—Dinner concert, Dick Long's
Nankin Cafe Orchestra.
7:30 p. m.—"Brainier Night."
SATURDAY, JAN. 31.
8:00 p. m.—"Fire-side Philosophies," Rev.
Roy L. Smith, pastor Simpson M. E.
Church, Minneapolis.
8:15 p. m.—Opening of Twin City Auto-
mobile show and trade week.

WDAF—KANSAS CITY, MO.
(411 METERS)
(Central Time.)

SUNDAY, JAN. 25.
4:00 to 5:00 p. m.—Classical music by
the Star's Radio Orchestra.
MONDAY, JAN. 26.
8:00 to 9:15 p. m.—Program by the Ivan-
hoe Band, directed by Walter A.
French, and the Ivanhoe Glee Club,
directed by Edward H. Gill Jr.
11:45 p. m. to 1 a. m.—The Plantation
Players, Hotel Muehlebach.
TUESDAY, JAN. 27.
11:45 p. m. to 1 a. m.—Theater enter-
tainers, appearing on the stage of the
Newman Theater.
WEDNESDAY, JAN. 28.
8:00 to 9:15 p. m.—Program given by
Montgomery Ward & Co.
THURSDAY, JAN. 29.
11:45 p. m. to 1 a. m.—The Plantation
Players, Hotel Muehlebach.
FRIDAY, JAN. 30.
8:00 to 10:00 p. m.—Popular program.
11:45 p. m. to 1 a. m.—The Plantation
Players, Hotel Muehlebach.
SATURDAY, JAN. 31.
6:00 to 7:00 p. m.—Music, Trianon En-
semble, Hotel Muehlebach.

WEAF—NEW YORK, N. Y.
(492 METERS)
(Eastern Time.)

SUNDAY, JAN. 25.
7:20 p. m.—Musical program by Remy
and His Gang direct from the Capitol
Theater.
8:15 p. m.—Organ recital direct from the
chapel at Columbia University.
MONDAY, JAN. 26.
6:00-11:30 p. m.—Dinner music from the
Rose Room of the Hotel Waldorf-
Astoria; Gustav Langenus, clarinetist;
musical program direct from the Mark
Strand Theater; Raisen Quartet; In-
auguration speech of Dr. Kopetzky di-
rect from the Academy of Music; music
by the A and P Gypsies. Talk by Capt.
Gordon Gordon-Smith on Foreign Af-
fairs. Ben Bernie and His Orchestra
direct from the Hotel Roosevelt grill.
TUESDAY, JAN. 27.
6:00-11 p. m.—Dinner music from the
Rose Room of the Hotel Waldorf-
Astoria; Michael Marketa's Orchestra;
talk on financial conditions by Bank
of America; Florence Duryea, violin-
ist; talk by John F. Hill, optometrist;
the Gold Dues Twins; "Eveready
Hour," the Silvertown Cord Orchestra
under the direction of Joseph Knecht.
WEDNESDAY, JAN. 28.
6:00-12 p. m.—Dinner music from the
Rose Room of the Hotel Waldorf-
Astoria; synagogue services under the
auspices of the United Synagogue of
America; Justin Lawrie, tenor; Berumen,
pianist; concert by the Phil-
harmonic Society of New York direct
from Carnegie Hall.
THURSDAY, JAN. 29.
6:00-12 p. m.—Dinner music from Rose
Room of the Hotel Waldorf-Astoria;
midweek services under the auspices
of the Greater New York Federation
of Churches; Columbia University lec-
ture on Contemporary English Fiction;
Irwin Hassell, pianist; Victor presen-
tation of famous artists. Silvertown
Cord Orchestra under the direction of
Joseph Knecht. Vincent Lopez and His
Orchestra from Hotel Pennsylvania,
New York City.
FRIDAY, JAN. 30.
6:00-12 p. m.—Dinner music from Rose
Room of the Hotel Waldorf-Astoria;
Mount Royal Orchestra under the di-
rection of Phil Paulucci; Happiness
Candy Boys; Hohner Harmony Hour;
Florence Burns, contralto; Big Ten
Dinner of the Western College Confer-
ence direct from Hotel Astor; Meyer
Davis Lido-Venice Orchestra direct
from Lido-Venice Restaurant.
SATURDAY, JAN. 31.
6:00-12 p. m.—Dinner music from the
Rose Room of the Hotel Waldorf-
Astoria; Madge Kennedy, stage and
screen star in song recital; Phillippe
Steele, baritone; talk by Sophie Irene
Loeb. Concert by the Waldorf-Astoria
Orchestra direct from the lobby
of the hotel. Ida Davenport, colora-
ture soprano; Vincent Lopez and His
Orchestra from the grill of the Hotel
Pennsylvania.

WEAR—CLEVELAND,
OHIO (364.3 METERS)
(Eastern Time.)

SUNDAY, JAN. 25.
1:00 p. m.—Symphony concert by Allen

Theater Orchestra, direct from Allen
Theater.

MONDAY, JAN. 26.
7:00 p. m.—Musical program broadcast
direct from Loew's State Theater.

TUESDAY, JAN. 27.
7:30 p. m.—Program arranged by the
Cleveland News. Vocal solos, duets,
mixed quartet and male quartet num-
bers by members of professional de-
partment of the studio of Ralph Ever-
ett Sapp. E. G. McMullen, pianist.
Violin selections. Five-minute playlet
by members of the Thimble Theater
Guild. Dance numbers.

WEDNESDAY, JAN. 28.
7:00 p. m.—Dinner concert by Ivan
Francis and his Hotel Cleveland Or-
chestra, broadcast direct from the ho-
tel.

THURSDAY, JAN. 29.
7:00 p. m.—Dance numbers by Austin J.
Wylie and his orchestra, direct from
Golden Pheasant Restaurant. Vocal
and piano selections by Miss Florence
Johnson and Miss Florence Griffin.
8:15 p. m.—Musical program by Carl
Rupp and his orchestra. Bill Tracy,
tenor, and Bud Russell, pianist.

FRIDAY, JAN. 30.
7:00 p. m.—Organ recital by Edwin Ar-
thur Kraft, direct from Public Audi-
torium.

WFAA—DALLAS, TEX.
(476 METERS)
(Central Time.)

SUNDAY, JAN. 25.
5:00 p. m.—Vesper service, Westminster
Presbyterian Church.
6:00 p. m.—Radio Bible Class.
7:30 p. m.—First Methodist Church,
South.
9:30 p. m.—McDowell Sisters, Misses
Edith and Grace, in Hawaiian music
recital.

MONDAY, JAN. 26.
8:30 p. m.—Edmonds Quartet, enter-
tainers.

TUESDAY, JAN. 27.
8:30 p. m.—Recital by Dallas Woman's
Forum, music division.
11:00 p. m.—Organ recital at the Palace
Theater.

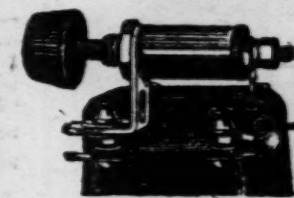
THURSDAY, JAN. 29.
8:30 p. m.—Singers from Midlothian, Tex.
11:00 p. m.—Adolphus Hotel Orchestra.

FRIDAY, JAN. 30.
8:30 p. m.—Program by Texas Penitentiary
Orchestra.
SATURDAY, JAN. 31.
8:30 p. m.—Baylor University Alumni
Founder's Day program at the Jetter-
son Hotel.
11:00 p. m.—Adolphus Hotel Orchestra.

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RADIO PE

WGR—BUFFALO, N.
(319 METERS)
(Eastern Time.)

SUNDAY, JAN. 25.
4:00 p. m.—Organ recital, George
Bouchard.
7:15 p. m.—Pre-service organ recital
from Central Presbyterian Church
evening service.
MONDAY, JAN. 26.
8:00 p. m.—Program by the
Bank of Buffalo.
9:00 p. m.—Anglo Musical Club con-
cert from Carnegie Hall.
TUESDAY, JAN. 27.
9:00 p. m.—The Eveready Hour.
10:00 p. m.—Goodrich Silvertown
Orchestra.

WEDNESDAY, JAN. 28.
6:30 p. m.—Vincent Lopez Hotel
dinner music.
8:15 p. m.—Concert by the Philhar-
monic Orchestra, consisting of 103 pie-
ces from Carnegie Hall.
10:15 p. m.—First Presbyterian Church
Quartet.

THURSDAY, JAN. 29.
6:00 p. m.—Hallpyrd String Quartet
dinner music.

FRIDAY, JAN. 30.
8:30 p. m.—Victor and Goodrich
concert from WEAF, New York City.
8:30 p. m.—Billy McKay, Buffalo
Lauder.

SATURDAY, JAN. 31.
8:45 p. m.—Recital by Blanch K.
hans of Little Valley, N. Y.
9:00 p. m.—Musical program by the
agora Battery Co.

SUNDAY, JAN. 25.
10:00 p. m.—Larkin String Orchestra
dinner music.
10:00 p. m.—Hallpyrd String Quartet
dinner music.
10:00 p. m.—Banquet of Metropolitan
Insurance Co., direct from New
City, N. Y.

WGTV—SCHENECTADY
(380 METERS)
(Eastern Time.)

SUNDAY, JAN. 25.
5:00 p. m.—Organ recital by Fran-
Rogers, assisted by T. Roy Keefe,
pianist, from St. Peter's Ephe-
rales Church.
7:30 p. m.—Service of First Church
Christ Scientist.
9:00 p. m.—Program by Waldorf-A-
Orchestra, Joseph Knecht, di-
rect from Carnegie Hall.
10 p. m.—Selections by Hampton
tute Quartet; also broadcast by
MONDAY, JAN. 26.
7:15 p. m.—Address, "Organization
Agriculture," by Peter G. Ten Eyck.
7:25 p. m.—Address, "The Four
Spots in New York State Tax Le-
gation," by H. C. McKenzie, tax
representative of the New York State
Bureau Federation.

TUESDAY, JAN. 27.
7:45 p. m.—Talk, "Income Tax,"
F. Zoller.
8:00 p. m.—Program by WGY Or-
chestra, assisted by John Leather, harp.
10 p. m.—Brunswick Hour of Mus-

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RADIO PROGRAMS FOR THE WEEK—Continued

WGR—BUFFALO, N. Y.
(319 METERS)
(Eastern Time.)

SUNDAY, JAN. 25.
4:00 p. m.—Organ recital, George Albert Bouchard.
7:15 p. m.—Pre-service organ recital, direct from Central Presbyterian Church, evening service.
MONDAY, JAN. 26.
4:00 p. m.—Program by the Liberty Bank of Buffalo.
5:00 p. m.—Ango Musical Club concert.
8:00 p. m.—Melodette Orchestra.
TUESDAY, JAN. 27.
9:00 p. m.—The Eveready Hour.
10:00 p. m.—Goodrich Silvertown Cord Orchestra.
WEDNESDAY, JAN. 28.
4:30 p. m.—Vincent Lopez Hotel Statler dinner music.
7:15 p. m.—Concert by the Philharmonic Orchestra, consisting of 103 pieces, direct from Carnegie Hall.
8:15 p. m.—First Presbyterian Church Quartet.
THURSDAY, JAN. 29.
4:00 p. m.—Hallpyrd String Quartet dinner music.
7:00 p. m.—Victor and Goodrich concert from WEAF, New York City.
FRIDAY, JAN. 30.
4:30 p. m.—Vincent Lopez Hotel Statler dinner music.
8:30 p. m.—Billy McKay, Buffalo Harry Lauder.
10:45 p. m.—Recital by Blanch K. Langhans of Little Valley, N. Y.
9:00 p. m.—Musical program by the Niagara Battery Co.
10:00 p. m.—Larkin String Orchestra.
SATURDAY, JAN. 31.
4:00 p. m.—Hallpyrd String Quartet dinner music.
8:30 p. m.—Banquet of Metropolitan Life Insurance Co., direct from New York City, N. Y.

WGY—SCHENECTADY,
(380 METERS)
(Eastern Time.)

SUNDAY, JAN. 25.
9:00 p. m.—Organ recital by Frank Hill Rogers, assisted by T. Roy Keefe, violinist, from St. Peter's Episcopal Church.
11:30 p. m.—Service of First Church of Christ Scientist.
9:00 p. m.—Program by Waldorf-Astoria Orchestra, Joseph Knecht, director; also broadcast by WJZ.
10 p. m.—Selections by Hampton Institute Quartet; also broadcast by WJZ.
MONDAY, JAN. 26.
7:15 p. m.—Address, "Organization in Agriculture," by Peter G. Ten Eyck.
7:25 p. m.—Address, "The Four High Spots in New York State Tax Legislation," by H. C. McKenzie, tax representative of the New York State Farm Bureau Federation.
7:45 p. m.—Program by pupils of Irene Conley.
TUESDAY, JAN. 27.
7:45 p. m.—Talk, "Income Tax," by I. F. Zeller.
9:00 p. m.—Program by WGY Orchestra, assisted by John Leather, baritone.
10 p. m.—Brunswick Hour of Music.

11:40 p. m.—Organ recital by Stephen E. Botschlar, from Proctor's Harmonium, Bleeker Hall, Albany.
THURSDAY, JAN. 29.
8:30 p. m.—Program of United States Navy Band from Washington, also broadcast by WRC, Washington, and WJZ, New York.
11:30 p. m.—Organ recital by Stephen E. Botschlar, from Proctor's Harmonium, Bleeker Hall.
FRIDAY, JAN. 30.
7:45 p. m.—Health talk.
8:00 p. m.—Address, "The Pan-American Scientific Congress," Henry Wallace Gardner.
8:30 p. m.—Radio drama, "Inside the Lines," by Earl Derr Biggers, presented by the WGY Players, also broadcast by WJZ. Music by the WGY Orchestra.
10:40 p. m.—Tschakowsky program.
SATURDAY, JAN. 31.
7:30 p. m.—International Intercollegiate Night, auspices of Edison Club and engineers of General Electric Co.

WHAS—LOUISVILLE, KY.
(400 METERS)
(Central Time.)

SUNDAY, JAN. 25.
4:30 p. m.—Choral evensong service at Christ Church Cathedral. Men and boys' choir of 60 voices.
MONDAY, JAN. 26.
4:00 p. m.—Selections played on the Alamo Theater big organ.
TUESDAY, JAN. 27.
7:30 p. m.—Concert by the Rossen Entertainers of Jeffersonville, Ind. Fifteen-minute specialty by Wendell Hall of New York City.
WEDNESDAY, JAN. 28.
7:30 p. m.—Concert by the K. & L. Terminal Railroad Orchestra.

THURSDAY, JAN. 29.
7:30 p. m.—One-hour concert, under the auspices of Mrs. Jane Webster Murrell. Saw solos, Prof. William W. Francisco; piano solos, Prof. William W. Francisco; vocal solos, Paul Roach, accompanied by Prof. William W. Francisco. Fifteen-minute specialty by Wendell Hall of New York City.
FRIDAY, JAN. 30.
7:30 p. m.—Concert by Al Wiesman's Novelty Orchestra.
SATURDAY, JAN. 31.
7:30 p. m.—Concert by Barney Rapp's Orchestra of the Brown Hotel. Fifteen-minute specialty by Wendell Hall of New York City.

'WHAZ—TROY, N. Y.
(380 METERS)
(Eastern Time.)

MONDAY, JAN. 26.
9:00 p. m.—Concert program, vocal and instrumental. Address, "How Electricity Works for You," John G. Duffy, secretary, Utica Chamber of Commerce.
10:30 p. m.—Palladino Orchestra, popular dance music.

WHO—DES MOINES,
IOWA (522.3 METERS)
(Central Time.)

SUNDAY, JAN. 25.
11:00 a. m.—Church service, University Church of Christ.
MONDAY, JAN. 26.
7:30 p. m.—Stewart Watson.
8:00 p. m.—Classical program under direction of Dean Holmes Cowper of Drake University.
MONDAY, JAN. 26.
11:15 p. m.—Organ recital, L. Carlos Meier, master organist, at the Capitol Theater, Iowa.
WEDNESDAY, JAN. 28.
7:30 p. m.—Bankers Life Radio Orchestra. Evelyn Fowler, pianist. Mr. P. J. Louberge, French soloist.
9:00 p. m.—The Des Moines Theater Symphonic Orchestra.
FRIDAY, JAN. 30.
7:30 p. m.—Classical program under direction of Dean Raymond N. Carr of Des Moines University.
8:30 p. m.—The Williamson Bros., mandolin, guitar and banjo artists.

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RADIO PROGRAMS FOR THE WEEK—Continued

WIP—PHILADELPHIA, PA.
(509.9 METERS)

(Eastern Time.)
TUESDAY, JAN. 27.
8:15 p. m.—The Philadelphia Police Band under the direction of Lieutenant Joseph Kiefer, broadcast direct from the police band room.
9:00 p. m.—Concert by the Stetson Chorus from the John B. Stetson Co.
10:30 p. m.—Special dinner music by Harvey Marburger and his vaudeville orchestra, broadcast direct from the Cafe L'Aiglon.

THURSDAY, JAN. 29.
8:15 p. m.—The Delaphine Minstral Troup.

9:00 p. m.—Violin recital by Jacob Rader, dinner of the Philadelphia Music League prize. Flora Ripka, accompanist.
11:00 p. m.—Dance music by Harvey Marburger and his vaudeville orchestra, broadcast direct from the Cafe L'Aiglon.

SATURDAY, JAN. 31.
8:00 p. m.—America's New Passion Play, "Vision," by Rev. John F. Burns. Presented by the Villanova Players.
10:05 p. m.—Dinner music by Art Coogan and his Club Madrid Orchestra, broadcast direct from the Club Madrid.
11:05 p. m.—Organ recital by Karl Bonawitz, broadcast direct from the Germantown Theater.

WLS—CHICAGO, ILL.
(345 METERS)

(Central Time.)
SUNDAY, JAN. 25.
6:30 p. m.—Ralph Emerson.

7:00 p. m.—Musical program by choir of Julia Gay Memorial M. E. Church.

TUESDAY, JAN. 27.
8:00 p. m.—Evening R. F. D. program.
9:00 p. m.—Florence K. White, soprano; WLS Theater present Anthony Wons in scenes from Shakespeare's "Much Ado About Nothing"; Kenneth Clark, Hawaiian guitar; Art Kahn and his Senate Teacher Syncopators; Myrtle Case in "The Songs of the Bird"; Isham Jones and his College Inn Orchestra; Ford and Glenn; Vaudeville talent furnished by Carroll Agency; Ralph Emerson; Isham Jones and his College Inn Orchestra; Ford and Glenn.

WEDNESDAY, JAN. 28.
8:00 p. m.—Evening R. F. D. program.
9:00 p. m.—Jimmy Whelan, Irish tenor.
9:10 p. m.—WLS Theater presents Wallace Bruce Ambary in Literary Interpretation of Rudyard Kipling: Kipling's Versatility, His Humor, His Patriotism; WLS Four Aces of Harmony; Senate Symphonic Orchestra, Philharmonic quartette; Isham Jones and his College Inn Orchestra; Ford and Glenn.

THURSDAY, JAN. 29.
8:00 p. m.—C. A. Ball, baritone; WLS Theater presents Radio drama: Marha Bjorn, contralto; Senate Theater Symphony Orchestra; Nuba Allan; Kenneth Clark and his Hawaiian guitar; Isham Jones and his College Inn Orchestra; Ford and Glenn.

SATURDAY, JAN. 31.
7:20 p. m.—National Barn Dance with Isham Jones and his College Inn Orchestra.
11:15 p. m.—Senate Theater Revue.

WLW—CINCINNATI, O.
(423 METERS)

(Central Time.)
SUNDAY, JAN. 25.
7:50 p. m.—Services of the First Presbyterian Church of Walnut Hills.

8:30 p. m.—Concert by the Western and Southern Orchestra. Soloist, Joseph Vito, solo harpist with the Cincinnati Symphony Orchestra.

MONDAY, JAN. 26.
6:00 p. m.—Dinner hour concert, featuring the Selinsky Instrumental Quintet.
8:00 p. m.—The Times-Star program. The Times-Star Orchestra. (Twelve Symphony Orchestra men directed by William Kopp.)

TUESDAY, JAN. 27.
10 p. m.—Concert program, featuring the Ohio Rubber Male Quartet and Instrumental Trio of flute, violin and celeste.

WEDNESDAY, JAN. 28.
7:00 p. m.—Special concert program given by Iota Chapter S. A. I. Sorority from the Cincinnati Conservatory of Music.

8:00 p. m.—Miss Jessica Steinle, mezzo soprano; Miss Edythe Tolken, violin; Miss Beulah Perryman, accompanist; by the Formica Concert Orchestra; Elizabeth Carlisle, soprano; Louise Rasch, piano.

THURSDAY, JAN. 29.
10 p. m.—Concert program, featuring the Cooper Orchestra and Male Quartet.

WMAQ—CHICAGO, ILL.
(447.5 METERS)

(Central Time.)
MONDAY, JAN. 26.
6:30 p. m.—Violin recital by Milan Fink.

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RADIO PR

TUESDAY, JAN. 27.
8:20 p. m.—Clara E. Laughlin, talk. Association of Commerce and Industry of Chicago, Ill.

9:15 p. m.—Musical program, announced.

WEDNESDAY, JAN. 28.
8:20 p. m.—Piano concert. Artists announced.

THURSDAY, JAN. 29.
8:00 p. m.—Talk under the auspices of the Western Railways Committee. Boy Scout talk.

8:15 p. m.—To be announced.

8:30 p. m.—Lecture from University of Chicago.

8:45 p. m.—Walther League program.

FRIDAY, JAN. 30.
8:00 p. m.—Weekly Wide-Awake program directed by Mrs. Frank Ford.

8:30 p. m.—Musical geography, Mrs. Marx E. Oberndorfer.

8:45 p. m.—Musical program from Ind.

SATURDAY, JAN. 31.
8:00 p. m.—LaSalle Hotel Orchestra.

8:30 p. m.—Radio photologue, "Reporting," by Junius B. Wood.

8:45 p. m.—Weekly Balaban & Katz cago Theater revue.

WMC—MEMPHIS, TEN.
(500 METERS)

(Central Time.)
MONDAY, JAN. 26.
8:30 p. m.—Special organ recital.

TUESDAY, JAN. 27.
8:30 p. m.—Lecture by Edward Ho Griggs from the Goodwyn Institute.

11:00 p. m.—Midnight Frolic by Richard's Orchestra.

THURSDAY, JAN. 29.
8:30 p. m.—The Hotel Gayoso Orchestra.

FRIDAY, JAN. 30.
8:30 p. m.—Prof. Chin Chin and his Blue's Cafeteria Novelty Orchestra.

11:00 p. m.—Midnight Frolic, to be announced later.

SATURDAY, JAN. 31.
8:30 p. m.—Program to be announced later.

WOAI—SAN ANTONIO, TEXAS (394.5 METERS)

(Central Time.)
TUESDAY, JAN. 27.
7:30 p. m.—Services of Central Church.

8:30 p. m.—Selections from Rigolotto Verdi, the WOAI Entertainers. Instrumental music by the WOAI Trio.

TUESDAY, JAN. 27.
8:30 p. m.—Selection from light of WOAI Entertainers, the WOAI and Jimmy's Joys Orchestra.

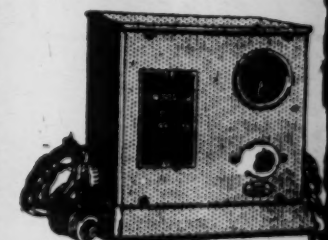
THURSDAY, JAN. 29.
8:30 p. m.—Jimmy's Joys Dance Orchestra.

WOAW—OMAHA, NEB.
(522.3 METERS)

(Central Time.)
SUNDAY, JAN. 25.
6:00 p. m.—Bible study period.

9:00 p. m.—Musical chapter series First Christian Church.

MONDAY, JAN. 26.
8:00 p. m.—Mozart grand opera program.

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RADIO PROGRAMS FOR THE WEEK—Continued

FRIDAY, JAN. 30.
8:00 p. M.—Address, "Missouri," by George A. Pickens, General Secretary Missouri Association.
8:15 p. m.—Square dance fiddlin' tunes played by Bill Caton and Ola Gathright, colored fiddlers of Tebbetts, Mo., as sponsored by Mr. D. C. Smart.

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WMC—MEMPHIS, TENN.
(500 METERS)
(Central Time.)

MONDAY, JAN. 26.
8:30 p. m.—Special organ recital.

TUESDAY, JAN. 27.
8:30 p. m.—Lecture by Edward Howard Griggs from the Goodwyn Institute.
11:00 p. m.—Midnight Frolic by Rhinehardt's Orchestra.

WEDNESDAY, JAN. 29.
8:30 p. m.—The Hotel Gayoso Orchestra.

THURSDAY, JAN. 30.
8:30 p. m.—Prof. Chin Chin and his Brillling's Cafeteria Novelty Orchestra.
11:00 p. m.—Midnight Frolic, to be announced later.

FRIDAY, JAN. 31.
8:30 p. m.—Program to be announced later.

WAOA—SAN ANTONIO, TEXAS (394.5 METERS)
(Central Time.)

TUESDAY, JAN. 27.
7:30 p. m.—Services of Central Christian Church.

8:30 p. m.—Selections from Rigoletto, by Verdi, the WAOA Entertainers. Instrumental music by the WAOI Trio.

WEDNESDAY, JAN. 28.
8:30 p. m.—Selection from light operas. WAOA Entertainers, the WAOI Trio and Jimmy's Joys Orchestra.

THURSDAY, JAN. 29.
8:30 p. m.—Jimmy's Joys Dance Orchestra.

WOAW—OMAHA, NEB.
(522.3 METERS)
(Central Time.)

SUNDAY, JAN. 25.
6:40 p. m.—Bible study period.
8:40 p. m.—Musical chapter service, First Christian Church.

MONDAY, JAN. 26.
8:40 p. m.—Mozart grand opera program

WOC—DAVENPORT, IOWA
(498 METERS)
(Central Time.)

SUNDAY, JAN. 25.
8:00 p. m.—Church service. Rev. H. B. Cox, pastor Calvary Baptist Church.
9:30 p. m.—Musical program. The Palmer Little Symphony.

MONDAY, JAN. 26.
8:00 p. m.—Musical program. Program by a group of artists from Clinton, Ia.

10 p. m.—Special, "Ten Nights in a Barroom," a drama in five acts presented by the Dramatic Club of the Palmer School of Chiropractic.

WEDNESDAY, JAN. 28.
8:00 p. m.—Organ recital from the B. J. Palmer recital. Edwin Swindell, organist; Chas. Kerns, tenor.

THURSDAY, JAN. 29.
9:00 p. m.—Orchestra program. Program by Bernie Schultz and his orchestra, of Davenport, Ia.

FRIDAY, JAN. 30.
8:00 p. m.—Musical program. Leo T. Boylen, pianist; Alice Ostrander, soprano; Olga Eden, soprano.

SATURDAY, JAN. 31.
9:00 p. m.—Orchestra program. Louis Connor, his LeClair Hotel Orchestra, broadcasting direct from the LeClaire Winter Garden, Moline, Ill. Song and novelty numbers by Peter MacArthur, baritone.

WOS—JEFFERSON CITY, MO. (440.9 METERS)
(Central Time.)

SUNDAY, JAN. 25.
7:30 p. m.—Religious service of the Central Evangelical Church.

MONDAY, JAN. 26.
8:00 p. m.—Program by the Missouri State Prison Orchestra.

WEDNESDAY, JAN. 28.
8:00 p. m.—Address, "Physical Education for Girls," by Dr. Henry S. Ourtis,

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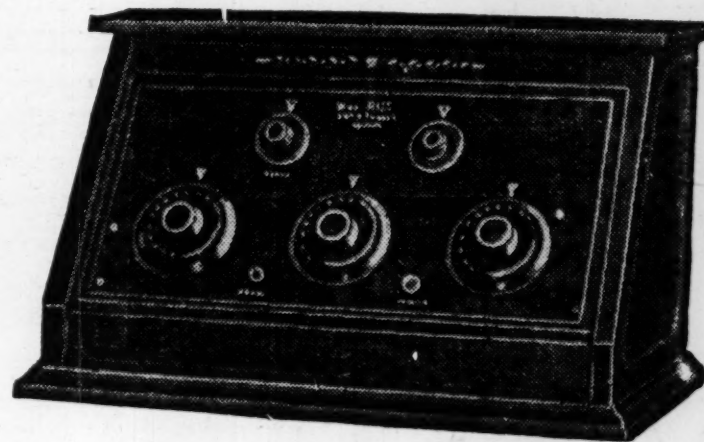
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